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Summary of Grants & Contracts Active on June 30, 1974

National Center for Health Services Research

1974

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Summary of

**GRANTS AND
CONTRACTS**

ACTIVE ON JUNE 30, 1974

**NATIONAL CENTER
FOR
HEALTH SERVICES RESEARCH**

REPRODUCED BY
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PREFACE

The seventh edition of the "Summary of Grants and Contracts Administered by the National Center for Health Services Research and Development," contains all projects active on June 30, 1974. It is intended to serve as a reference document for staff of the National Center and other interested individuals, regarding studies and programs being supported by NCHSRD on problems relating to the availability, organization, distribution, utilization, quality and financing health services.

Projects are organized alphabetically by grant or contract number. Several indexes are included for cross reference purposes:

- (1) Alphabetical index by principal investigators;
- (2) Alphabetical index by institutions;
- (3) Alphabetical listing by State;

Dates indicated for each project represent the project period. For each grant and contract, the parenthetical dollar figure represents the total funds (direct and indirect costs) awarded during FY 1974.

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EXPLANATION OF CODES

Prefixes Preceding Project Numbers

- CD: Designates grants transferred to the National Center for Health Services Research and Development (NCHSRD) from the former National Center for Chronic Diseases Control.
- CH: Designates grants transferred to NCHSRD from the former Division of Community Health Services/Division of Medical Care Administration.
- HM: Designates grants transferred to NCHSRD from the former Division of Hospital and Medical Facilities.
- : Grant projects identified by 5-digit numbers without a prefix are demonstration grants transferred to NCHSRD from the former Office of Comprehensive Health Planning.
- HS: Designates research and demonstration grants which either (1) originated in NCHSRD, or (2) were transferred to NCHSRD and have been continued with NCHSRD funds.
- TO1 HS: Designates training grants which either (1) originated in NCHSRD, or (2) were transferred to NCHSRD and have been continued with NCHSRD funds.
- HSM: Designates contracts in the Health Services and Mental Health Administration funded after the reorganization of the Public Health Services.
- PH: Stands for Public Health and is used for contracts in HSMHA active before the reorganization of the Public Health Service.
- P.L.480: Designates international research projects financed under Public Law 480.
- OEO: Designates project transferred to the NCHSR from the Office of Equal Opportunity.

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- **Nursing Home Simulation Model Completion and Validation (HSM 110-73-501)
- **Analysis of Data from the National Survey--Trends in Health (HRA 106-74-24)
- **Short-Term Training for Nursing Home Dietitians & Supervisors (HRA 106-74-72)
- **Training of Medical Record Personnel Working in Nursing Homes (HRA 106-74-124)
- **Short-Term Training of Physicians Serving as Medical Directors (HRA 106-74-156)

Indiana

- **Family Nurse Practitioner Program (HS 00883)
- **Evaluation of Health Services Delivery Systems (TO1 HS 00149)
- **Development, Testing and Evaluation of Alternative Health (HSM 110-71-150)
- **Experimental Health Services Delivery Systems (HSM 110-71-253)
- **Improving the Performance of Hospital Outpatient Clinics (HRA 106-74-191)

Kentucky

- **Project to Improve Utilization of Radiologic Manpower (HS 00567)
- **An Improved Utilization of the Out-Patient Pharmacist (HS 00635)
- **Primex-Family Nurse Training Program in Rural Areas (HS 00885)
- **Experimental Health Services Delivery Systems (HSM 110-72-301)
- **Experiments and Demonstrations Authorized under P.L. 92-603 (HRA 106-74-172)

Louisiana

- **New Orleans Cooperative Health Information System (HS 00991)

Massachusetts

- **A Study of the Effects of Medically Oriented Housing (HS 00903)
- **Automation of Medical Consultation (HS 00188)
- **Hospital Computer Project (HS 0024C, formerly HS 00688)
- **Comparative Health Systems: Differentiation and Convergence (HS 00272)
- **An Econometric Model of the Health Care Sector (HS 00284, formerly CH 00423)
- **Ambulatory Scheduling: A Management Science Approach (HS 00307)
- **Health Services Research Center at Harvard (HS 00472, formerly CH 00443)
- **Development of a Differential White Cell Count System (HS 00696)
- **Design and Evaluation Methodology for Outpatient Systems (HS 00709)
- **Blood Collection and Allocation, Operational Studies (HS 00870)
- **Evaluation of Alternative Models of Vision Care (HS 00888)
- **Computer Aided Medical Decision Making (HS 00911)
- **Massachusetts Cooperative Health Statistics System (HS 01001)
- **Coded Language Information Processing (HS 01054)
- **Home Care: An Alternative to Institutionalization (HS 01134)
- **An Approach to the Assessment of Long-Term-Care (HS 01162)
- **Diffusion of Innovation in the Hospital Industry (HS 01238)
- **Blood Donor Motivation and Recruitment (HS 01440)
- **Computer Aids to Therapy in Critical Care (HS 01472)
- **Comprehensive Health Prison Health Project (HS 01501)
- **Rapid Telephone Access to Radiology Reports (HS 01508)
- **Medical History Question: A Health Screening Test (HS 01563)
- **A Study of Preventable Hospital Admissions (HS 01611)
- **Models for Health Care Decentralization (HS 01658)
- **Research Training in Medical Care (TO1 HS 00003)
- **Sociology and Health Services (TO1 HS 00039)
- **Health Services Training (TO1 HS 00085)
- **Development of Automated Medical History Questionnaire (HSM 110-73-335)
- **Incentives and Decisions Underlying Hospital's Adoption (HSM 110-73-513)
- **Nationwide Long-Term Care Education System (HSM 110-73-518)
- **Evaluation of ENCHO Program (HSM 110-73-526)
- **A Systems Approach to Identification of Problems and Analysis (HRA 106-74-180)

Maine

- **Training Long-Term Care Facility Nurse Aides in Rural Areas (HRA 106-74-71)

Maryland

- **Operations Research in the Health Services (HS 00090)
- **Medical Care and Patient Care Research Program (HS 00110)
- **Health Services Research and Development Center (HS 00429)
- **Corporate Decision Making in Health Sector (HS 01145)
- **Health Services for long-Term Care (HS 01250)
- **Population-Based Quality Assurance in HMCs (HS 01310)
- **Economic Determinants of Ambulatory Care Use (HS 01329)
- **Evaluating an Outcome Based Quality Assurance System (HS 01590)
- **Medical Care Research Training (TO1 HS 00012)
- **Community Medicine Scholarship Program (TC1 HS 00132)
- **Standardization of the MUMPS Computer Language (73001)
- **To Provide Scientific and Technical Assistance in the MUMPS (Interagency Agree)
- **Clinical Evaluation of the Health Care Technical Division (Interagency Agree)
- **Prognostic Epidemiology: Heart Disease, Cancer and Stroke (PH 43-68-948)
- **Impact Evaluation of EMS Projects (HRA 106-74-1)
- **Innovative Approaches to Training Nursing Home Personnel (HSH 110-72-407)
- **Impact of State Certificate of Need Laws on Health Care Cost (HRA 106-74-57)
- **Followup Health Surveys for Evaluating Neighborhood Health (HRA 106-74-66)
- **Development of a Multimedia Resource Center (HRA 106-74-73)
- **Analysis of 1974 State Health NP Licensure Legislation (HRA 106-74-125)
- **Evaluation of Health Planning Methodologies (HRA 106-74-133)
- **A Preliminary Analysis of Effects of Categorization of Hosp. (HFA 106-74-134)
- **Program Analysis of Algorithm Projects and Design of a Study (HRA 106-74-144)
- **Medicaid Analysis of Utilization, Cost, and Quality (HRA 106-74-145)
- **Systems of Reimbursement for LTC Services (HRA 106-74-186)

Michigan

- **In Econometric Model of the Medical Care Market (HS 00041)
- **Hospital Management Systems Demonstration (HS 00228)
- **Research Designs for Evaluating Health Services (HS 00386)
- **Program of Research in Interviewing Methods (HS 00624)
- **Michigan Cooperative Health Information System (HS 00982)
- **Community Care: The Chronic Disease Service Module (HS 01059)
- **Michigan Services Intergration System (HS 01453)
- **Federal Program Implementation in Selected States (HS 01495)
- **Method of Evaluating and Improving Ambulatory Medical Care Quality (HS 01503)
- **Development of Criterion Measures of Nursing Care (HS 01649)
- **Network Evaluation Project (OED 51517)
- **Training for Research in Medical Care Organization (TO1 HS 00002)
- **Research Training in Hospital Administration (TO1 HS 00022)
- **A Study of Physician Attributes and the Diagnosis of Essential (HSM 110-73-379)
- **Impact of Economic Stabilization Program on Hosp. & Hosp. Care (HSM 110-73-467)
- **Preliminary Analysis of Patterns of Hospital Use and Cost (HRA 106-74-47)
- **A Study of State Policies Allowing Foreign Medical Graduates (HRA 106-74-68)

Minnesota

- **Health Services Research Center (HS 00471)
- **The Pharmacist as a Primary Provider of Maintenance Care (HS 00872)
- **Innovative Technology in a Rural Health Care System (H 01591)
- **Traineeship in Health Care Research (TO1 HS 00029)
- **Biometry (TO1 HS 00053)
- **Nationwide Long-Term Care Education System (HRA 106-74-167)

Missouri

- **Optimal Nursing Assignments Based on Difficulty (HS 01391)
- **Computer Recognition of Human Disease Patterns (HS 00014, formerly CD 00235)
- **Missouri Automated Radiology System (HS 00646)
- **Morbidity and Mortality Data in Health Planning (HS 00902)
- **Housing and Health Care Paths of Dependent Elderly (HS 01425)
- **Broadcast Computer System for Patient History Taking (HS 01533)
- **Pilot Project - HUMPS Users' Group (HS 01540)
- **Utilizing Peer Review Data to Meet Multi-User Needs (HS 01640)
- **Automated Physician's Assistant (HS 01771)
- **Sociology of Health Care (TO1 HS 00046)
- **Technology in Health Care (TO1 HS 0074)
- **Health Care Systems Design Training Program (TO1 HS 00103)
- **Short-Term Training for Nursing Home Nurses (HSM 110-72-174)
- **Experimental Health Services Delivery System (HSM 110-72-323)
- **Nationwide Long-Term Care Education System (HRA 106-74-171)

Mississippi

- **Ecology of Migrant People--Mississippi (HS 00422, formerly CH 00436)
- **Cost--Effect--Potential of a New HIC Health Care Team (HS 00588)
- **Experimental Medical Care Review Organization (HS 00798)
- **Inservice Training Program for Nurses' aides and Food-Handling (HSM 110-73-411)

Nebraska

- **Evaluation of Remote Radiographic Communication (HS 01210)

New Hampshire

- **Medex Demonstration Program--Northern New England (HS 00568)
- **Health Subsystem: The Public Health Agency (HS 01500)
- **Task Activities Analysis of EMS (HS 01665)
- **Computer-Based Paramedic Support and Audit (HSM 110-73-403)

New Jersey

- **Newark Health Services Delivery Subsystem (HS 01090)
- **Analysis of Group Practice Efficiency (HRA 106-74-119)

New Mexico

- **Demonstration Reducing Costs Via Hospital Satellite (HS 00189)
- **Develop Test and Evaluate Professional Review (HS 00929)

New York

- **Explorations in Health Services (HS 00013)
- **Physicians View Social Change in Medicine (HS 00117)
- **Poverty and Non-Poverty Groups in Multiphasic Screening (HS 00209)
- **Optimum Utilization of Hospitalization Ancillary Services (HS 00236)
- **Clinical and Cost Benefits of the Evaluation Unit (HS 00321)
- **Economics of Health Research Programs (HS 00451)
- **Community Child Health Studies (HS 00467, formerly CH 00433)
- **Vital and Health Statistics Monographs (HS 00572, formerly CH 00075)
- **Application of Statistical Methods of Record Linkage (HS 00685)
- **A Day Hospital Service in Rehabilitation Medicine (HS 01043)
- **Time in the Demand and Supply of Medical Care (HS 01165)
- **Computer-Based Consultation in Care of Critically Ill (HS 01195)
- **Child Health Care Delivery - A Comparative Evaluation (HS 01220)
- **Nassau County Cooperative Health Statistics System (HS 01285)
- **Family Nurse Practitioner Program (PRIMEX) (HS 01366, formerly HS 01392)
- **East Harlem Broadband Health Communications Network (HS 01392)
- **Comprehensive Health Services, Program Review and Evaluation (OEO 20026)
- **Training Program in Medical Sociology (TC1 HS 00019)
- **Sociomedical Research Training (TO1 HS 00032)
- **Doctoral Training Program in Health Services Research (TO1 HS 00068)
- **Community Health Training for Physicians (TO1 HS 00106)
- **Political Science and Health Policy (TO1 HS 00161)
- **Experimental Health Services Delivery System (HSM 110-71-255)
- **Nationwide Long-Term Care Education System (HSM 110-73-425)
- **Short-Term Training for LPNs and LVNs Currently Employed in (HSM 110-73-457)
- **Assistance in Conference Administration Procedures (HSM 110-73-466)
- **Indices of Adequacy of the Emergency Medical Care Process (HRA 106-74-138)
- **Experiments and Demonstrations authorized under P.L. 92-603 (HRA 106-74-174)
- **Experiments and Demonstrations authorized under P.L. 92-603 (HRA 106-74-175)

North Carolina

- **Organization, Utilization, and Assessment of Primary Health Care (HS 00026)
- **Stability of Physician Staff in Large Organizations (HS 01332)
- **Family Nurse Practitioner in North Carolina - Primer (HS 01333)
- **Legal Issues in Health Care (HS 01539)
- **Laboratory for Development of Health Information System (HS 01613)
- **Evaluation of Alternative Systems of Services for Aged (SRS 93-P-75172)
- **Epidemiology (TO1 HS 00036)
- **Biostatistics Related to Health Services (TO1 HS 00045)

Ohio

- **Computers-Automation: Impact on Laboratory Management (HS 00060)
- **Study of Nature and Effects of Messages Received at an (HRA 106-74-157)
- **Family Nurse Practitioner Program (HS 00884)
- **Laser Mediated Telemedicine in Anesthesia (HS 01390)
- **An Evaluation of the Impact of the Implementation & Operation (HSM 110-73-331)

Oklahoma

- **Biostatistics (TO1 HS 00051)

Oregon

- **Implementation of a MUMPS System to a Decentralized HMO (HS 01202)

Pennsylvania

- **Prosthetic Architecture for Mentally Impaired Aged (HS 00100)
- **Community Based Primary Health Care (HS 00218)
- **Effects of Medicare on Physician Utilization (HS 00469)
- **Regional Allocation of High Cost Health Services (HS 00714)
- **Development of a Primary Health Care Subsystem (HS 01102)
- **Alternate Regulation of Health Personnel (HS 01233)
- **Central Intake and A Systematized Approach to the Delivery (HS 01454)
- **Evaluation of Computer-Aided Care After Heart Surgery (HS 01467)
- **Local Administrative Effects of Federal Health Grants (HS 01507)
- **Analysis of Hospital Charges and Length of Stay (HS 01516)
- **A System Model For Health Care Delivery (HS 01529)
- **Model Services Delivery System for the Aging (HS 01534)
- **Health Law Project (HS 01547)
- **Social Sciences and Community Health Organization (TO1 HS 00009)
- **Medical Care Statistics (TO1 HS 00028)
- **Biostatistics for Health Care Evaluation (TO1 HS 00058)
- **Health Law (TO1 HS 00066)
- **Experimental Health Services Delivery Systems (HSM 110-71-234)
- **Experimental Health Services Delivery System (HSM 110-71-254)
- **Experimental Health Services Delivery System (HSM 110-71-256)
- **Nationwide Long-Term Care Education System (HSM 110-73-428)
- **Bibliography - Research Results of Projts. Supported by NCHSRD (HSM 110-73-454)
- **Hospital Cost Analysis: Implications for COLC Hospital Reg. (HRA 106-74-45)
- **Evaluation of Emergency Medical Devices and Systems (HRA 106-74-188)

Rhode Island

- **A Population Research Laboratory at Brown University (HS 00246)
- **A Prototype Statewide Health Services Data System (HS 00720)
- **Rhode Island Long-Term Care Information System (HS 00964)
- **Affiliation with Providers and Use of Medical Care (HS 01241)
- **Assessment of Prospective Reimbursement (HS 01427)
- **Family Investment in Child Health (HS 01623)
- **Metropolitanization and Delivery of Health Services (TO1 HS 00064)
- **Technical Assistance to Experimental Health Services Delivery (HRA 106-74-53)
- **Experiments and Demonstrations authorized under P.L. 92-603 (HRA 106-74-176)

South Carolina

- **Training in Health Services Research (TO1 HS 00063)

South Dakota

- **Experimental Health Services Delivery System (HSM 110-72-379)

Tennessee

- **Multiple Effects of Alternative Health Care Services (HS 00620)
- **Primex Demonstration Project Proposal (HS 00886)
- **Federal-State-Local Health Statistics System-Tennessee (HS 00965)
- **Health Care Among Tennessee Medicaid Recipients (HS 01703)
- **Biostatistical Training for Health Services Research (TO1 HS 00037)
- **Health Training Program in Sociology (TO1 HS 00078)
- **Experimental Health Services Delivery Systems (HSM 110-71-228)

Texas

- **Health Planning Using the Health Service Simulator (HS 01076)
- **Biometric Methods for Health Services Research Data (HS 01381)
- **Emergency Care Quality: Usefulness of Patient Profiles (HS 01589)
- **Analysis of Utilization of A Comprehensive HMO (HS 01653)
- **Health Services Training: Biostatistics (TO1 HS 00067)
- **Computerized Patient Management System for a Community Clinic (HSM 110-71-172)
- **Experimental Health Services Delivery System (HSM 110-71-230)
- **Transfer of Computer Applications in Health Services (HSM 110-72-182)
- **Feasibility of Developing a Data Archive for the NCHSRD (HSM 110-73-517)
- **Nationwide Long-Term Care Education System (HSM 110-73-531)
- **Training Long-Term Care Facility Nurse Aides in Rural Areas (HRA 106-74-117)

Utah

- **Utah NEDEX Demonstration Program (HS 00649)
- **Experimental Medical Care Review Organization (HS 00820)
- **Automated Health Services (HS 01053)
- **Salmon-Challis Medical Communication Project (HS 01481)
- **Quality Assessment Methods in Primary Care (HS 01596)
- **Inservice Training Project for Nurses' Aides in ICPs (HSM 110-73-410)
- **Evaluation of Medex Physicians Assistants - NEDEX - Utah (HRA 106-74-58)
- **Training Long-Term Care Facility Nurse Aides in Rural Areas (HRA 106-74-113)

Virginia

- **Experimental Medical Care Review Organization (HS 00808)
- **Determination of Planning Methodology Appropriateness for CHP (HRA 106-74-11)
- **A Study of the Technology Required to Support Non-Physician (HRA 106-74-182)

Vermont

- **Automation of a Problem Oriented Medical Record (HS 00175)
- **The Vermont Model Health Statistics System (HS 01197)
- **Experimental Health Services Delivery Systems (HSM 110-71-231)

Washington

- **NEDEX Demonstration Program (HS 00558)
- **Seattle Prepaid Health Care Project Evaluation (HS 00694)
- **Economic Analysis Washington State Nursing Home Data (HS 01582)
- **Evaluation of Outcome of Nursing Home Care (HS 01638)
- **Biostatistics Training for Health Services Research (TC1 HS 00034)
- **Continuing Education in Restorative Long-Term Care for Nursing (HSM 110-73-405)
- **Development of a Sickness Impact Profile (HRA 106-74-74)
- **Nationwide Long-Term Care Education System (HRA 106-74-189)

Wisconsin

- **Cooperative Health Data Development for Planning (HS 01296)
- **Comparative Study of Health Program Design Strategies (HS 01413)
- **Sociological Training in Health Services Research (TO1 HS 00091)
- **Help-Seeking Experience and Agency Characteristics (HS 01189)
- **Validity and Reliability Studies on the Techniques for (HRA 106-74-141)

Wyoming

- **Training Long-Term Care Facility Nurse Aides in Rural Areas (HRA 106-74-76)

****Explorations in Health Services (HS 00013)**

Eliot L. Freidson, Ph.D.
New York University/Dept of Sociology
Montefiore Hospital & Medical Center
111 E. 210th Street
Bronx, New York 10467

9/1/66 - 8/31/74

(\$92,202)

This is a renewal of a research program designed to organize, supervise and administer a series of limited exploratory studies of the sociology of health services, using as the research site the Montefiore Hospital and Medical Center.

Some studies will concern themselves with careful, small-scale testing of current hypotheses, and others will be exploratory in that they will be concerned with the close study of aspects of health services, relevant to BHSR goals.

****Computer Recognition of Human Disease Patterns (HS 00014, formerly CD 00235)**

Donald A.B. Lindberg, M.D.
University of Missouri Medical Center
School of Medicine
Columbia, Missouri 65201

6/1/66 - 8/31/74

(No Funding FY 74)

The primary objective of this project continues to be to determine how computer systems may be used to aid the biomedical investigator to recognize or discover patterns of disease in patient care data.

Current attention includes: (1) investigation on the effect of sample size, number of parameters, distribution of observation, and measurement of confidence intervals for separation of diseased from normal populations; (2) determinations of the limitations of the human observer in using graphical displays; and (3) making available to the health care community clinical test data bases which exemplify or test these principles.

****Organization, Utilization, and Assessment of Primary Health Care (HS 00026)**

John Cassel, M.P.H., MD
University of North Carolina
Chapel Hill, North Carolina 27514

6/16/69 - 2/28/75

(\$145,003)

To compare alternative systems of primary health care delivery in the United States; to determine which systems most adequately fulfill the health care needs of population groups with varying socioeconomic characteristics.

Emphasis will be on the potential patient prior to entry into the system, and on the effects of the system on those who do seek care. Communities with varying socioeconomic characteristics will be selected for studies of utilization, satisfaction, and effectiveness with respect to primary care.

The project will contribute to the development and utilization of methodologies for assessment of the quality and cost-effectiveness of health care services, a major Center goal.

****Research to Increase Health Services to Children (HS 00029)**

Henry K. Silver, M.D.
University of Colorado Medical Center
School of Medicine
Denver, Colorado 80220

6/16/69 - 5/31/76

(\$142,323)

The objective of this project is to evaluate a new type of child health professional, the Child Health Associate who will be qualified to provide diagnostic, preventive, and therapeutic services to more than 80 percent of the children presently being given care by pediatricians in their offices.

The training of this health worker will be completed in five years as compared to the eleven years now needed to train a pediatrician. The course of study will include two years at the medical center (one of which will be spent primarily with clinical subjects), and a one-year internship.

****An Econometric Model of the Medical Care Market (HS 00041)**

Paul J. Feldstein, Ph. D.
City Center Building
220 East Huron
University of Michigan
Ann Arbor, Michigan 48108

2/1/71 - 1/31/75

(\$77,352)

The project will develop an econometric model of the medical care market in order to study the interrelationships between the various components of it such as physicians, hospital, nursing homes, outpatient facilities, home providers, and consumers.

The approach involves conceptualizing the interrelationships of the medical care market, translating them into equations, and collecting data with which to estimate the relations. Also, a computer program will be developed to facilitate use of the model.

The project is important as it enables policymakers to determine all of the changes in parameters of the health care system caused by changes in any one. It is also extremely useful teaching device for health services researchers and policymakers as it enables them to work with the system as a whole.

****Computers-Automation: Impact on Laboratory Management (HS 00060,
formerly HH 00526)**

Arthur E. Rappoport, M.D.
Youngstown Hospital Association
Youngstown, Ohio 44501

6/30/72 5/31/76

(\$151,976)

This project proposes to measure and document the impact of combining computer techniques and laboratory automated devices, involving three hospitals which share laboratory services.

Changes resulting from this automation will be measured and evaluated in the following areas: manpower requirement; direct and indirect costs; levels of technical competence required; quality control; value of multiphasic screening; and laboratory size, arrangement, and design; share utilization of laboratories; and availability of laboratory information. The latter activities call for the development of the model to provide information on costs over a variety of test mixes and levels of automation. The project will be concerned with the methodology involved in determining best methods of operation, specimen collection procedures, performance and sequencing of tests, and computer programs to develop most efficient staffing patterns and operating efficiencies.

****Use of Computer to Improve Clinical Laboratory (NS 00075,
formerly NS 00390)**

David Saligson, M.D., Sc.D.
Yale University School of Medicine
New Haven, Connecticut 06520

7/1/69 - 6/29/76

(\$49,350)

The primary objective of this project is to find the most economical ways to provide good clinical laboratory data rapidly without increasing medical care costs.

It is proposed that the operation of the laboratory be examined by making a systems study of laboratory data production and acquisition, and by simulating methods of handling the data by using analog, digital and hybrid computer techniques. Efficiency of manual, semi-automatic and fully automatic analytical procedures will be determined by using the model and computer simulation of the model. New clinical laboratory with electronic data handling systems are anticipated.

****Health Administration Studies (NS 00080)**

Edin S. Anderson, Ph. D.
University of Chicago
5720 Woodlawn Avenue
Chicago, Illinois 60637

12/1/65 - 11/30/77

(\$251,570)

The basic purposes of the Center for Health Administration Studies of the University of Chicago are:

- 1) To undertake research on problems generic to the development of improved knowledge concerning organization and delivery of health services.
- 2) To translate and publicize this research to public and private agencies and systems.
- 3) To train practitioners for administrative roles in health care agencies and systems.
- 4) To prepare selected individuals for research and teaching in the field.

****Operations Research in the Health Services (HS 00090)**

Charles E. Flagle, Eng. D.
Johns Hopkins University
615 North Wolfe Street
Baltimore, Maryland 21205

4/1/63 - 4/30/76

(\$996,721)

Objectives are: (1) to apply operations research techniques and approaches to problems of decision, organization, and management of health services; (2) to engage with physicians, nurses, and administrators in implementation of research results; and (3) to develop operations research theory and methods relevant to health services problems and to incorporate these developments in teaching programs.

The investigators are proceeding in four project areas: (1) Medical decision processes in multiphasic health testing, diagnosis, and therapy; (2) strategies of patient care, including the development of a long-term patient classification scheme and an attempt to establish resource utilization patterns for a long-term care; (3) integration of models of health care systems through interaction with local and state planning projects; and (4) systems analysis and technology, with emphasis on an assessment of the effects of technology on manpower substitution and productivity.

****Prosthetic Architecture for Mentally Impaired Aged (HS 00100)**

R. Howell Lawton, Ph.D.
Home for Jewish Aged
5301 Old York Road
Philadelphia, Pennsylvania 19141

6/28/68 - 6/31/76

(No Funding FY 74)

This project will determine the behavioral and medical consequences of moving from a traditionally designed environment for institutionalized mentally impaired older people to a new one designed with the therapeutic and prosthetic needs of these patients in mind. Since the staff and patients' families are part of the total treatment system, the impact of the change as perceived by both, and as reflected in the behavior of staff, will also be assessed. This project is completed and the final report will be forthcoming within a short time.

****Simulation of Hospital Subsystems (HS 00163, formerly HS 00543)**

John S. Thompson, Ph. D.
Yale University School of Medicine
60 College Street
New Haven, Connecticut 06510

4/1/67 - 8/31/74

(121,338)

The objective is to develop, test and apply a generalized hospital planning method.

It will consist of the following components: (1) a patient classification system to allow for the definition of homogeneous classes from the point of view of resource consumption; (2) a patient path generator which will associate patient classes and their resource consumption with specific facilities to be used; (3) a path simulator which will predict the resources consumed by any mix of patient classes; and (4) a resource allocation model which will translate resource consumption into budgetary, goal attainment, and service level terms so that more effective planning decisions can be made. This system is to be available to planners on an interactive basis.

****Automation of a Problem Oriented Medical Record (HS 00175)**

Lawrence L. Weed, M.D.
Director of PROMIS Laboratory
Burlington, Vermont 05401

6/15/69 - 5/31/76

(91,006,002)

The goal of this project is to improve the quality of medical care by providing a comprehensive medical decision support and medical record system. The objective is to develop and demonstrate the Problem Oriented Medical Information System (PROMIS) designed to serve both inpatients and outpatients. This will be accomplished by creating additional frames for recording and entering problem oriented information in each of the four phases of medical action (data base, problems, plan, progress notes) by integrating radiology, pathology, clinical chemistry, laboratory, pharmacy, admitting, billing, accounting, and ambulatory care services into the computerized problem oriented medical record of individuals. The project will provide an effective feedback loop for corrective action in both individual patient care and education, allow detailed demographic and epidemiological analyses for population groupings, and include the basis for cost benefit analysis for both the individual and population.

****Automation of Medical Consultation (HS 00188)**

Howard I. Bleich, M.D.
Beth Israel Hospital
Boston, Massachusetts 02215

6/1/76 - 2/30/77

(2410,655)

The objective of this project is the development of an inexpensive automated system that will accept clinical and laboratory data concerning patients with renal or hematologic disorders and generate in return an evaluation note.

This note will be designed to review with the physician the pathophysiology of the disorder and to assist the physician with diagnosis and treatment. Data will be entered and returned at the same teletype terminal. Applicability will be limited initially to renal and hematologic disturbances, but the ultimate goal will be to extend it to other areas of medical subspecialization.

In promoting the dissemination of specialized knowledge to outlying areas of primary care, this project addresses the Center goal of increasing equity and access to health care. The initial program for acidbase and electrolyte management developed under this project is currently in use in more than 40 states. Expectations include development of other programs with this approach and then evaluation in primary practice settings.

****Demonstration Reducing Costs Via Hospital Satellite (HS 00189)**

Ray Woodham, M.S.A.
Presbyterian Hospital Center
1180 Central Avenue, S. E.
Albuquerque, New Mexico 87106

12/1/69 - 9/30/74

(No Funding FY 74)

To obtain financial data and demonstrate savings in construction and operating costs associated with the building and management of a satellite hospital affiliated with a longer hospital center.

Profiles relating to finances, equipment, personnel utilization, and quality of care, will be gathered for the base hospital, the satellite, and comparison hospitals. Information will be gathered by means of questionnaires (relating to patient and physician acceptance, patient and family workdays and schooldays saved, shared-supervisory personnel utilization), IHA and HAS data, Medicare cost formula and the like. In utilization of this data four comparisons will be made: (1) Base to satellite, (2) base to similar sized hospital, (3) satellite to similar size hospital, (4) and combined base and satellite to hospitals of similar size.

****Poverty and Non-Poverty Groups in Multiphasic Screening (NS 00209)**

Raymond Fink, Ph.D.
Health Insurance Plan of Greater New York
625 Madison Avenue
New York, New York 10022

1/1/70 - 12/31/74

(\$243,235)

This proposal brings together two recent developments in an action program--research in the health problems of the poor and automated multiphasic screening as an aid in disease detection.

The project utilizes the screening examination to define the health status, practices and attitudes of a defined poverty population covering a broad age range. Action to modify adverse aspects of these health components is to be instituted and evaluation is in terms of change as compared with what occurs in a control group. To be studied are the roles that paramedical personnel can play in conjunction with automated health screening to improve health practices. Differential effects on the poverty and non-poverty populations will be examined.

****Community Based Primary Health Care (NS 00218)**

Kenneth E. Rogers, M. D.
Presbyterian-University Hospital
230 Lothrop Street
Pittsburgh, Pennsylvania 15213

1/1/70 - 9/30/75

(\$125,000)

The objective is to demonstrate an alternative way of organization and delivery health services, by creating a simple health and social delivery team to serve a definite population tying this team to a medical school hospital complex.

Specifically the aims are: (1) to describe the health needs, demands, and health care utilization of a defined low-income urban adult population; (2) to determine the part of the system in which specific health problems can be managed most suitably from the standpoint of quality of care, patient convenience and satisfaction, and economy; and (3) to develop an academic program which can be used for teaching and research in health care by the school of medicine and other schools of the health professions.

****Hospital Management Systems Demonstration (HS 00228)**

John Griffith
University of Michigan
Ann Arbor, Michigan 48106

12/1/69 - 11/30/76

(\$214,520)

The purpose of this project is to demonstrate the usefulness of monitoring and control systems with quantitative analytic techniques in actual hospital management. The goal of the demonstration is to: (1) identify the information necessary for rational management; (2) develop systems necessary for collecting and processing that information; and (3) to install these systems.

The topics which the grant deals with are fundamental to the problems of hospital management, and they reflect upon the general social problem of control of hospital costs.

****Optimum Utilization of Hospitalization Ancillary Services (HS 00236)**

David Valinsky, Ph.D.
Mt. Sinai School of Medicine
11 East 100th Street
New York, New York 10029

6/1/65 - 5/31/76

(\$73,910)

This project, over a nine-year period, has developed techniques in researching the utility of comprehensive simulations of ancillary service, organizational structures and procedures within a large teaching hospital.

Research will be centered in Maimonides Hospital of Brooklyn, where a variety of proven statistical techniques will be employed to collect and analyze pertinent data. Flow models will be developed, descriptive of (1) magnitude, range, and distribution of both in-patient demand and out-patient demands, and (2) intensity and probability of each patient demand pattern.

This model should insure that manpower and equipment resources of hospital ancillary services are used to their fullest effectiveness, resulting in shortened hospital stays of patients and in cost reduction to patient and insurance carrier.

****Hospital Computer Project (HS 00240, formerly HS 00488)**

G. Otto Barnett, M.D.
Fruit Street
Massachusetts General Hospital
Boston, Massachusetts 02114

5/1/68 - 8/31/77

(\$624,342)

The objective of this project is the development of a relatively inexpensive modular system for facilitating data handling within the hospital.

The principal investigator's work addresses itself to the Center objectives of rationalizing the administrative and medical problem-solving processes within the hospital. In addition, this work has generated computer programs for outpatient scheduling and history taking, both of which are now in use in the ambulatory clinic at Massachusetts General Hospital. In addition, the HUNPS language developed by the investigator is emerging as a critical lubricant for development of multiple time-shared applications programs for use in the physician's office.

****A Population Research Laboratory at Brown University (HS 00246)**

Sidney Goldstein, Ph.D.
Brown University
Providence, Rhode Island 02912

7/1/66 - 9/30/74

(No Funding FY 74)

To conduct studies of the population of Rhode Island and to relate the socio-demographic characteristics of the population to medical needs and utilization patterns.

Five successive annual sample surveys of 1250-1500 Rhode Island households including both cross-sectional and longitudinal data are obtained.

The population laboratory is providing basic data on utilization and access for a community research and development effort in Rhode Island.

****Comparative Health Systems: Differentiation and Convergence**
(HS 00272)

Mark G. Field, Ph. D.
Boston University
Boston, Massachusetts 02215

9/1/68 - 8/31/75

(\$32,237)

This is a comparative study of the nature, structure, and functioning of health systems in about a half dozen industrialized countries. It is an attempt to delineate the contours of the health systems of contemporary societies, and the way their internal characteristics have evolved.

This work examining as it does common trends and problems experienced by various industrial nations in the course of their development, is of importance in connection with the NCHSRD's goals in relation to the changes in the accessibility of health services, and moderate costs, while maintaining or improving the quality of health services.

****An Econometric Model of the Health Care Sector** (HS 00284, formerly CM 00423)

Martin S. Feldstein, Ph. D.
Harvard College
Cambridge, Massachusetts 02138

9/1/68 - 8/31/75

(\$54,549)

The long-term objective of this project is to develop an operational, statistically estimated model of the health care sector which can provide a basis for policy discussions as well as a framework for teaching and future research.

Primary emphasis will be devoted to an analysis of the effects of alternative government policies. To date the investigator has completed important quantitative studies of: (1) the price of physician services; (2) the Medicare system; and (3) hospital cost inflation. Current work on studies of the demand for insurance, wages and employment in the hospital industry, and investment in hospital beds. He has also completed under this grant, a paper on medical care price statistics.

Studies completed have provided valuable insights into the problems of controlling costs and redistributing and increasing consumption of medical services. Completion of the entire model will permit more comprehensive analysis of alternative government policies in terms of their effects on cost containment and equality of access to health services.

****Search: A link to Services (HS 00287)**

Joy G. Cauffman, Ph.D.
University of Southern California
Los Angeles, California 90007

1/1/70 - 3/31/75

(\$181,804)

To enhance and facilitate the referral process, enabling more consumers to reach appropriate sources of health care.

A data bank, containing information on an estimated 30,000 agencies and individual providers of services in the Los Angeles area, will be established and the data stored in a central on-line computer. The bank will be queried through terminals located at six referral centers whose personnel will be trained in the use of both the Medical Problem Classification System and the Social Problems Inventory System, in order to insure an accurate provisional diagnosis. Evaluation will focus on the degree to which inappropriateness of referrals can be reduced via this system.

****Ambulatory Scheduling: A Management Science Approach (HS 00307)**

John F. Bockhart, Ph.D.
Lahey Clinic Foundation
Boston, Massachusetts 02215

6/29/70 - 6/30/74

(No Funding FY 74)

The objective of this project is to develop a data system for patient scheduling, resource allocation, and management control.

The system utilizes a computer for administration of an automated medical history questionnaire, the analysis of which takes advantage of demographic information and predetermined protocol logic to predict the correct specialties to which a patient should be scheduled.

The development of an operational data system for a large multispecialty clinic is an important program objective of Health Care Technology Division of the National Center.

****Clinical and Cost Benefits of the Evaluation Unit (HS 00321)**

T. Franklin Williams, M.D.
Genesee Region Health Planning Council, Inc.
Rochester, New York 14604

6/1/70 - 12/31/75

(\$192,382)

This project will evaluate the clinical outcomes and costs of the operation of an evaluation and placement service for chronically ill and aged patients. The evaluation-placement service, previously shown to be effective in increasing the rate of appropriate "placements," both in institution and at home with supportive services, will be provided to randomly assigned stratified test and control groups of Medicaid applicants for nursing home care. Periodic re-assessments of patients in both groups will measure accuracy of both the evaluation-placement unit and Medicaid assignment procedures, as measured by independent assessors, using community standards of appropriateness applied with blind techniques.

Comparative analyses will be made, using clinical and physical functioning scales, of the outcomes achieved by patients appropriately placed vs. those inappropriately placed, and between test and control groups. Similar comparisons will be made of both direct and inputted health care costs.

****Human Population Laboratory for Epidemiologic Studies (HS 00360,
formerly CH 00076)**

A.C. Hollister, M.D.
Department of Public Health
Berkeley, California 94704

6/1/62 - 6/29/76

(\$329,200)

The objective of this project is a long-term study of the relationships between social, psychological and physical factors and health status. Of particular importance is the role of stress in determining health status.

Data is obtained from both a longitudinal and a cross-sectional approach and methodological problems will be studied as well as substantive questions.

The basic research conducted will increase our methodological capability to measure health status and use of health services.

****Research Designs for Evaluating Health Services (HS 00386)**

Irwin M. Rosenstock, Ph.D.
University of Michigan
School of Public Health
Ann Arbor, Michigan 48104

6/1/70 - 9/30/74

(No Funding FY 74)

The immediate objectives are increased knowledge of how to evaluate the effectiveness of personal health programs and increased knowledge of the usefulness of various quasi-experimental designs in attributing causality to program activities; to test a model for evaluating health program developed by the principal investigators under an earlier grant, for its applicability to medical services programs. The application of the model requires assessment of the net effect of program activities, that is judging program effectiveness in terms of outcomes in a group exposed to the program after allowances are made for what their status would have been in the absence of the program. If successful, the results of this project will determine if health services researchers are justified in using quasi-experimental designs as they have been doing for several decades. The rare opportunity that the principal investigator has of implementing both a true experimental design and several quasi-designs makes this project potentially one of the most productive projects in health services research methodology.

****Research to Improve the Quality and Efficiency of Medical Care (HM 00390)**

Charles Sufnagel, M.D.
Georgetown University Medical Center
3800 Reservoir Road, N.W.
Washington, D. C. 20007

4/1/64 - Indefinite

(No Funding FY 74)

The objectives of this experimental construction project are to: (1) construct a demonstration facility containing all the essential elements for the treatment of the acutely ill within a single facility, and, (2) demonstrate modernization and reorganization of existing medical facilities to support the newly constructed units while also demonstrating new experimental research concepts which will increase the efficiency of medical care in the entire health complex.

It is planned to evaluate this project in terms of its ability to: (1) produce a higher quality of professional care as evidenced by a higher patient recovery; (2) provide for greater utilization of available, highly trained professional personnel in key areas; (3) lower the cost of "true" intensive care via the increased efficiency in both professional services and administrative support; and (4) lower the cost of care in the long-stay bed area of the existing hospital by the reduction or elimination of functions that will no longer be needed in the existing hospital because of its altered role in the treatment complex.

****Improvement of Methodology for Clinical Evaluations (HS 00408)**

Alvan R. Feinstein, M.D.
Yale University School of Medicine
New Haven, Connecticut 06510

6/30/70 - 5/31/75

(\$44,978)

The general objective is to improve the methods and data with which physicians make decisions in the therapeutic care of patients.

The approach is three-pronged: (1) to identify and collect details of important information that has been generally neglected in existing statistical data about the course and management of human illness; (2) to construct systems of classification that will allow coordinated appraisal of the diverse forms of data; and (3) to develop codes and programs that will enable computers to be used effectively as an adjunct in the decisions.

This project will improve the quality of care by demonstrating the need and developing the means for more rigorous definition and use of clinical data and disease characteristics, both for prognosis and evaluation of alternative therapeutic measures.

****A Program in Medical Care Costs and Manpower Research (HS 00409)**

Anne A. Scitovsky, M. A.
Palo Alto Medical Research Foundation
860 Bryant Street
Palo Alto, California 94301

6/1/70 - 9/30/74

(No Funding FY 74)

The objective is to conduct a research program in medical care costs and health manpower.

Projects to be undertaken include costs of treatment of selected illnesses, task analysis of physicians' practices, changes in physician practice in response to the threat of malpractice litigation, and quality of care in acute appendectomy.

The project is of interest as it a superior method of measuring medical care costs. Data has been collected and is being analyzed now. When completed, it will yield the most accurate picture of cost behavior over the last decade.

****Ecology of Migrant People--Mississippi (HS 00422, formerly CN 00436)**

Eddie W. Logan
Hilton Olive III Memorial Corporation
Lexington, Mississippi 39095

4/1/69 - 3/31/75

(\$49,570)

Having completed a comprehensive health survey of the black residents of rural Holmes County and determined the hypertension is the major adult health problem, the chief focus of the research effort has become the design, implementation and evaluation of a hypertension control program. Innovative aspects are the use of trained community persons for screening and follow-up in a rural poverty setting.

****Health Services Research and Development Center (HS 00429)**

Sam Shapiro
John Hopkins University
34th and Charles Streets
Baltimore, Maryland 21218

1/1/71 - 1/31/76

(\$697,422)

The objective of this project is to assemble an interdisciplinary team of scientists into a research group which can evaluate components of primary care systems to validate how health care can be proficed with maximum effectiveness of fiscal and manpower resources.

The multi-disciplinary projects are directly involved in questions of cost, quality and access by attempting to determine how quality care can be delivered to enrolled pre-paid groups at a moderate cost. Several papers have been published and others are being submitted. A management data system has been developed which is expected to provide a model for organized health systems.

****Economics of Health Research Programs (HS 00451)**

Michael Grossman, Ph. D.
National Bureau of Economic Research
261 Madison Avenue
New York, New York 10016

1/1/68 - 12/31/74

(\$200,146)

The objective of this project is to conduct a research program in the economics of health.

Current projects include a simultaneous equations model of the joint determination of health, hours of work in the market, and wage rates; an analysis of hospital utilization; studies of the implications of self-practice insurance and legalized abortions for health services; and an examination of how surgeons spend their nonsurgical professional time, and how work loads vary among a variety of practice settings. The last is an extension of previously completed work on surgical workloads.

****Community Child Health Studies (HS 00467, formerly CH 00433)**

Robert J. Haggerty, M.D.
University of Rochester
Rochester, New York 14627

2/1/69 - 6/29/78

(\$309,630)

Project has studied barriers to health care for children, new methods of meeting the shortage of pediatricians, and evaluated effectiveness of new care programs. One project has developed a comprehensive child health data base for selected families. A second project has evaluated the cost and effectiveness of pediatric nurse practitioners. A third is studying the consequence of chronic physical illness in children. The final project is investigating mother-child relationships in children with behavior problems.

****Effects of Medicare on Physician Utilization (HS 00469)**

Phillip E. Hentelme, Ph.D.
Graduate School of Public Health
University of Pittsburgh
Pittsburgh, Pennsylvania 15215

2/1/69 - 6/29/75

(\$75,969)

The objective is to determine the effects of the introduction of a Government sponsored universal physician services insurance program on the volume, distribution and delivery of services and consumer satisfaction with them. Metropolitan Montreal with a population of 2,500,00 will be the site.

Pre- and post-government-sponsored physician services insurance program will be compared: (1) the volume of physician services in various groupings; (2) the place physician services rendered; (3) hospitalization rates and duration of stay; (4) consumer satisfaction; (5) difficulty in obtaining appointments, home visits, and waiting time in doctors' offices; (6) the proportion of conditions thought to be responsive to medical treatment; (7) the point in the disease process at which patients seek medical advice; (8) patient load and work day of practicing physicians in Metropolitan Montreal; (9) relationship among physicians in active practice and the relationship of general practitioners to hospitals; and (10) the physicians' attitude toward the medical importance of conditions for which patients seek treatment.

****Health Services Research Center (HS 00471)**

Paul M. Ellwood, Jr. M. D.
Interstudy
123 E. Grant Street
Minneapolis, Minnesota 55404

2/1/69 - 1/31/75

(\$400,971)

The major focus of this Center-grant project is dealing with analysis and research in the policy decision making area. Attention is being given to the matter of evaluation with respect to certain aspects of HMO organization and development. There is also ongoing research in the area of "regulatory matters" (malpractice, and alternatives to it; legal barriers to the formation of HMO's; anti-trust litigation in the health care field), and on matters relating to national health insurance systems.

****Health Services Research Center at Harvard (HS 00472, formerly CH 00443)**

Paul H. Densen, Sc.D.
Harvard Medical School
Boston, Massachusetts 02115

6/1/69 - 3/31/76

(\$240,000)

The objectives are to: (1) organize a systematic approach to the evaluation of health programs at the project level and at the community level; (2) examine the implications of such evaluations for instituting changes in such programs, and to complete the feedback loop; (3) develop an adequate data base against which to assess the effectiveness of community programs in improving the health of the population.

An important element in the program is the symbiotic relationship between the Health Services Research Center (Research Unit) and the Harvard Center for Community Health and Medical Care. The Harvard Center directly focuses on education of health workers, community services, and research. The Research Unit will have as its major concern the evaluation of any resulting demonstration and of current and new approaches to the delivery of health care.

This project's focus on evaluation of health services delivery is of interest to NCHSR.

****Diagnostic Radiology Information System (HS 00525)**

Howard J. Barnard, M.D.
American College of Radiology
Chicago, Illinois 60606

11/1/71 - 2/28/75

(\$202,435)

The American College of Radiology has developed an information processing system for diagnostic radiology. The system utilizes dictated radiology reports and a thesaurus. Files are constructed which use cross indexing, and allow rather complex querying of the data base. Other features of the system include a billing module and radiology department analysis. The system requires large scale digital computing capability and uses natural language processing. The system is currently in use at the University of Arkansas. Continued funding is anticipated for two years in order to implement and evaluate the system at Duke University.

****Interorganizational Networks of Urban Health Services (NS 00547)**

German York, Ph. D.
University of Southern California
Los Angeles, California 90007

6/9/79 - 8/31/79

(\$7,757)

The objective is to investigate the conditions affecting the integration of health systems and the allocation of scarce resources to these systems. The object is to attempt to examine differences among systems of health organizations as these are affected by different patterns of community structure.

Information on the dependent variables-- characteristics of hospital integration and patterns of funding--will be obtained from an analysis of secondary sources--e.g., the American Hospital Association--and from questionnaire surveys sent to key health personnel. The 330 independent variables--general characteristics with a "Census of organizations"--to indicators of organized heterogeneity, organized social differentiation and organizational integration of cities will be constructed.

It is anticipated that this new approach to community theory will contribute to knowledge about the ways in which community factors affect the health care system.

****NIIIA Demonstration Program (NS 00556)**

David Lawrence
University of Washington
Department of Preventive Medicine
Seattle, Washington 98195

6/30/70 - 5/31/75

(No Funding FY 74)

The primary objective of this project is to continue evaluation efforts to determine the impact of Medex physician assistants, trained by this program, on the delivery of health care in the health care settings in which they are employed. Specific objectives are to measure the effect of Medex on: (1) costs of health care, (2) quality of care, (3) access to care, and (4) the productivity of the health services units employing Medex.

**Health Services Research Center (HS 00544)

James Cooney, Jr., Ph.D.
 Northwestern University
 619 Clark Street
 Evanston, Illinois 60201

4/1/71 -- 6/30/74

(No Funding FY 74)

To develop a major research and development program for improving intra-institutional and inter-institutional relationships in the health care system.

The central theme of activities relates to the issues associated with institutional effectiveness. To the extent that positive results may be practically implemented, the Center seeks to specifically encourage the widespread adoption and implementation of the results of research. Some of the specific project areas being addressed include: (1) general economic studies relative to third-party reimbursement and the impact of hospital economic behavior; (2) continued development of a health data information center; (3) examination of the impact of institutional mergers and shared services; (4) development of a methodology for determining optimal hospital size; (5) further development and refinement of methodologies designed to quantify productivity; (6) examination of legal constraints in designing information systems for hospitals; and (7) exploratory projects concerning patient education, hospital satellite facilities, and labor-saving devices and systems.

**Project to Improve Utilization of Radiologic Manpower (HS 00547)

Harold D. Rosenbaum, M.D.
 University of Kentucky Medical Center
 Lexington, Kentucky 40506

1/1/71 - 9/30/75

(\$80,000)

The objective is to demonstrate a method to improve utilization on radiologic manpower by developing a program that will train selected, highly motivated, registered radiologic technologists to assume many duties currently the sole responsibility of physician radiologists.

The project started October 1, 1970, and therefore has had no impact to date. If successful, it will have several beneficial effects. These would include: (1) an improvement in the radiology department of the small rural hospital by making available a skilled technologist who can do screening; (2) a reduction in the shortage of radiologists by the training of individuals who can deliver many radiologic services; (3) a reduction in the high turnover of radiologic technologists, by making a career ladder available; and (4) a further stimulus to other specialties of medicine to delegate duties heretofore considered to be functions of physicians.

****Nedex Demonstration Program--Northern New England (HS 00568)**

Arthur Jacobs, R.D.
Dartmouth College Medical School
Hanover, New Hampshire 03755

6/30/70 - 5/31/75

(\$90,771)

Since FY 1970, the National Center has supported the development and evaluation of NEDEX projects, serving as primary care physician assistant model, at six sites. Evaluation studies of Nedex trainees and graduates were initiated in fiscal year 1973; these studies provide basis for further study. The current evaluation strategy is aimed at obtaining needed measurement of NEDEX program's impact on primary care in terms of access, productivity, cost, and quality of medical care.

****Vital and Health Statistics Monographs (HS 00572, formerly CR 00075)**

Cari L. Erhardt, D.Sc.
American Public Health Association, Inc.
1740 Broadway
New York, New York 10019

5/1/61 - 12/31/74

(\$50 Funding FY 74)

The purpose of this project was to use the opportunity provided by the 1960 population census for a close examination of current vital and health statistics, in order to produce a series of monographs which not only present analyses of these findings, but also discuss trends and bring into evidence whatever other data are pertinent.

The review monograph will discuss longevity and morality in the United States in relation to the world situation; morbidity and mortality in relation to marital status; geographic variations and ethnic variations; social and economic factors; and projections of mortality. The review monograph should be useful for teaching in medicine, public health, and the behavioral sciences, for clues to further research as an aid in planning health programs, and for general information purposes.

This monograph series offers data on disease, disability, and deaths for the nation. It will serve as a baseline for the measurement of the impact of medical care programs.

****Cost--Effect--Potential of a New MIC Health Care Team (HS 00500)**

Marie C. Heglen
University of Mississippi Medical Center
2500 North State Street
Jackson, Mississippi 39216

4/1/71 - 3/31/76

(\$223,797)

The purpose of the project is to demonstrate and evaluate the cost, utilization, and effect of the care provided for low-income patients by this Maternal Infant Care Health Team with the nurse midwife as the central figure.

The team is based at the University Medical Center, but will have outreach into the surrounding urban and rural communities. The demonstration will include comparison of the quality of care provided by this team with care provided by the house staff in a teaching hospital, and an established "Children's Bureau MIC Project." The project will also demonstrate the effect of utilization of this team in a community hospital which has no house staff.

With the present health manpower shortage and the unequal distribution of health resources, this project is considered to have considerable potential for the MCMSB in attaining its goals of increasing access to health services, while maintaining high quality and limiting costs.

****Multiple Effects of Alternative Health Care Services (HS 00620)**

Samuel Wolfe, M.D., MPH
Rearmy Medical College
Nashville, Tennessee 37208

12/28/70 - 12/31/75

(\$255,736)

The objective of the project is to examine the multiple effects of three alternative methods of providing health services.

Three defined geographic areas in Nashville's predominantly low income neighborhoods are being delineated, with total defined populations in excess of 100,000 persons. In one area an OEO-funded comprehensive neighborhood health center with extensive outreach services will be a key source of care. In a second area a comprehensive services outpatient department for adults and a children and youth program, neither with extensive outreach, will be a key source for service. In the third area the "traditional" care available to the poverty community will be key source.

The work being performed through this grant is a follow-up of research activities begun through a prior contract. Evaluation of the three methods of health care delivery will focus on unmet health needs, levels of health, and patient satisfaction. Results should have implications for the evaluation of national health programs.

****Program of Research in Interviewing Methods (NS 00414)**

Charles F. Cannelli, Ph.D.
University of Michigan
Ann Arbor, Michigan

6/1/71 - 5/31/76

(\$171,220)

The objective is to improve reporting of health information in surveys. Studies show that inaccurate and incomplete reporting is common. Reporting becomes poorer as time between the event and the interview becomes longer, also events which are embarrassing and threatening are less well reported.

The proposal is to focus research attention on ways to improve the respondent's recall processes, both by changing the nature of the questions used and the interviewer's techniques. Procedures to increase the respondent's motivation to perform his role more adequately will be explored, both as a means of working harder to recall information and to increase the likelihood that he will report threatening information.

This is a methodological project designed to explore ways of improving the quality of survey data. Since survey data are the major source of information for health administrators and researchers, the potential contribution of this project to the health delivery system of the nation is twofold: more rational allocation of resources in the health field and increased productivity in health services research.

****in Improved Utilization of the Out-Patient Pharmacist (NS 00635)**

Paul Baumgartner, Jr.
Appalachian Regional Hospitals
Lexington, Kentucky 25661

1/1/72 - 7/31/76

(No Funding FY 74)

This is an exploratory grant having the objective to define, demonstrate and evaluate a more appropriate utilization of available pharmacist manpower resources than that which is traditional.

This project is in the planning stage, with implementation of the project in which the pharmacist provides consultation and other clinical services to the patient by the end of the first year.

****Missouri Automated Radiology System (HS 00446)**

James Lehr, M.D.
University of Missouri Medical Center
Department of Radiology
Columbia, Missouri 65201

3/1/79 - 2/26/75

(No Funding FY 74)

The objective of this project is to develop and demonstrate an interactive computer based system for a processing radiologic consultations and for conducting other departmental activities.

A modular approach is as follows: (1) to convert the existing computer based system for generating radiologic consultations for operation on a moderate sized, dedicated computer system; (2) to develop additional computer programs for the purpose of file library management, departmental record keeping, patient billing, and patient scheduling; to evaluate physician acceptance, timeliness of report delivery, flow delays, usage frequencies, utilization rates and other factors; (3) to develop as an end product a cost effective computer system for radiologic data which can be placed in operation at other hospitals and medical centers; and (4) to develop national economic models of the cost of radiological care and the effect of operation of the computer system. The NCHSSE goals of improving the cost and quality of health care through technology are key issues which this project addresses.

****Utah MEDIX Demonstration Program (HS 00649)**

Charles H. Castle, MD
University of Utah
50 North Medical Drive
Salt Lake City, Utah 84142

6/1/79 - 6/30/75

(No Funding FY 74)

The primary objective of this project is to continue evaluation efforts to determine the impact of Medex physician assistants, trained by this program, on the delivery of health care in the health care settings in which they are employed. Specific objectives are to measure the effect of Medex on: (1) costs of health care, (2) quality of care, (3) access to care, and (4) the productivity of the health service units employing Medex.

****Improving Patient Care by Automated Record Summaries (HS 00674)**

Olga M. Haring, M.D.
 Northwestern University Medical School
 303 E. Chicago Avenue
 Chicago, Illinois 60611

6/15/72 - 2/31/75

(\$121,555)

The purpose of this investigation is to evaluate the effect on the quality and quantity of medical services of the introduction of an automated record summary system. The Record Summary is designed with the following objectives: (1) to provide the physician with a convenient, current, concise, legible summary of the patient's record; (2) to identify physician's recommendations which were not carried out; (3) to identify omissions in recording observations and recommended treatment; (4) to identify deficiencies in medical reasoning; (5) to use the information to improve patient care by recommending corrective action; (6) to improve teaching.

****Application of Statistical Methods to Record Linkage (HS 00685)**

Charles Odoroff, Ph.D.
 University of Rochester
 Rochester, New York 14620

3/01/72 - 10/30/75

(No Funding FY 74)

This project proposes to extend existing theoretical and practical information concerning record linkage. The Grantee will investigate the application of existing statistical methodology to this problem, the need for modification to that methodology, will develop computer programs needed to design linkage rules and will explore the application of rules he develops to the analysis of data from the record system of Strong Memorial Hospital in Rochester, N. Y.

The HCNSRD has interest in methodological research in records linkage as they will serve as models for improvement in access, quality, and costs containment of health services delivery systems.

****Seattle Prepaid Health Care Project Evaluation (RS 00694)**

William C. Richardson
University of Washington
Seattle, Washington 98105

4/1/71 - 3/31/76

(\$326,496)

Objectives are: (1) to measure and evaluate the effects of removing economic barriers on the health status of recipients in the model cities area of Seattle; (2) to describe the comparative performance of two different delivery systems - prepaid group practice versus combined BC/BS - in terms of utilization patterns of prepaid health care program consumers and cost of services provided; (3) to observe and describe the operations and process of the community health board of the model cities program; (4) to develop and distribute management information (utilization data, etc.) to appropriate program administrations.

Examination of the management problems between providers, consumer and third party insurers of health programs serving model city areas are of concern to the Center.

****Development of a Differential White Cell Count System (RS 00694)**

Peter W. Neurath, D.Sc.
Tufts, New England Medical Center
171 Harrison Avenue
Boston, Massachusetts 02111

4/1/71 - 12/31/75

(\$353,500)

An interactive, automated, differential white blood cell counter is being designed and a prototype is being produced and will be demonstrated in a clinical setting.

This work represents an important application of technology to the reduction of costs of medical care. Nationwide, the number of differential white cell counts per year is about 100,000,000 at a cost of at least \$200,000,000 in patient billing. It is estimated that the counter being developed has the potential to reduce the cost per test by 50 percent, which could result in substantial overall economies. Additionally, white cell counting is a tedious task requiring the unflagging concentration of a skilled technician.

It is anticipated that the device under development will greatly increase the output per technician as well as the reproducibility of the test without commensurate increase in operator fatigue. Thus, in addition to decreasing costs, this program will result in the release of skilled manpower from a time-consuming task and will also increase the quality of medical services provided.

****Outcome Measurement Using a Health Status Index (HS 00702)**

J.W. Bush, M.D.
University of California
Department of Community Medicine
La Jolla, California 92037

2/1/70 - 12/31/75

(\$217,665)

The investigator proposes to try and determine the feasibility and utility of a quantitative indicator of health status which can be used for assessing the importance of a series of actual disease problems, and for indicating the benefits that can be expected from a health care program.

The investigator addresses himself to the ramifications of decision-making. He presents an opportunity to take the subjective experiences of health experts, transpose them into figures for numerical computation, and thereby develop a mathematical index of health.

This grant has direct bearing on the goals of the Center, Division and Branch, as well as for the new Experimental Health Services Delivery Systems. A "health index" has the potential to serve as a mechanism to evaluate the health care delivery system of the neighborhood, communities, or the nation. The development of the index has a long and difficult history.

****Design and Evaluation Methodology for Outpatient Systems (HS 00709)**

Edward J. Rising, Ph.D.
University of Massachusetts
Amherst, Massachusetts 01002

6/30/71 - 6/29/76

(\$72,503)

The objective of this project is to develop a planning methodology for the design and evaluation of both proposed and existing systems for providing outpatient services.

The methodology will be developed by an interdisciplinary team consisting of physicians, health administrators, medical sociologists, industrial engineers, and operations researchers, and will build upon work already begun at the University of Massachusetts prepaid health service and Albany neighborhood health center. Models will be developed for individual facilities, and then combined into a generally applicable methodology.

This project will give outpatient facility managers a quantitative method for decision-making with respect to staffing, organization, and facility layout. Improved decisions in these areas will materially reduce the cost of outpatient care, and improve the quality.

****Regional Allocation of High Cost Health Services (HS 00714)**

Harvey Wolfe
University of Pittsburgh
Pittsburgh, Pennsylvania 15213

3/1/72 - 5/31/75

(8186,573)

The objective is to develop quantitative methodologies which can be applied to the allocation of high cost health facilities and programs within a region. Unlike previous efforts, the investigators will include social and political factors and work closely with an active CHP agency.

****A Simulation Model for Emergency Medical Services (HS 00715)**

Harold E. Smalley, Ph.D.
Georgia Institute of Technology
Atlanta, Georgia 30332

6/30/72 - 12/31/78

(813,094)

This project will develop planning and evaluation methodologies for emergency medical system. The project will be done in parallel with an active emergency medical system planning effort for Atlanta being done with the (b) agency under Georgia RHP funds.

****1 Prototype Statewide Health Services Data System (HS 00720)**

H. Denman Scott, M.D.
Rhode Island Health Services Research, Inc.
56 Pine Street
Providence, Rhode Island 02903

4/1/71 - 9/30/74

(No Funding FY 74)

This is an exploratory project to demonstrate feasibility and begin development of methodology for evaluating physician performance in rendering care to patients. Exploratory work at the University of Connecticut began with house staff, proceeding then to the development and use of evaluation of clinical performance by faculty in clinical departments as an element in determining promotions. Eventually, the same principles will be applied in staff appointments and promotions, as well as control of quality of care in community hospitals.

****1 Computer-Based Drug Interaction Warning System (HS 00739)**

Stanley B. Cohen, M.D.
Stanford University
Stanford, California 94305

11/1/71 - 10/31/74

(\$274,997)

The goal of this project is to reduce the morbidity and costs associated with drug interactions. The objective is to develop a comprehensive computer-based program for the control and study of drug interaction in hospitalized patients. To accomplish this objective it will be necessary to: develop and appropriate computer methodology for prevention of undesirable drug interactions; evaluate the effects of this program on drug use and health care at Stanford University Hospital and the surrounding community; and develop the technology for documentation and prospective evaluation of the clinical consequences of administration of drugs which have been reported to interact, or which might be suspected of interacting.

••Foreign Medical Graduates and American Medicine (HS 00767)

Rosemary A. Stevens, Ph.D.
Associate Professor
Departmental of Epidemiology and Public Health
Yale University
60 College Avenue
New Haven, Connecticut 06510

2/1/72 - 6/29/75

(\$86,932)

The numbers of physicians entering American medicine are about equal from U. S. and foreign medical schools and hence graduates of foreign medical school have a major impact on patterns of physicians manpower in the United States and on the staffing of American hospitals. The objective of this study is to develop procedure for gathering information relevant to four major questions. (1) What have been the expectations of foreign physicians in coming to the United States and how have these expectations been fulfilled. (2) How have American hospitals recruited foreign interns and residents and how have they contributed to the training of these foreign medical graduates. (3) How have these foreign medical graduates used their American training in their subsequent careers (either in their own countries or in the U.S.). (4) How have the foreign medical systems been affected by this process.

••Emerging Patterns of Health Care for Young People (HS 00773)

Charles E. Lewis, M.D.
Public Health Foundation of
Los Angeles County
Los Angeles, California 90012

6/31/71 - 8/31/72

(No Funding FY 72)

This project aims to determine the effectiveness of select types of experiences on the health knowledge, attitudes and practices of a sample of 400 elementary school children.

The experimental model, based on the concept of socialization of the child into a new role as a health care consumer, involves role learning through the interactions of the child with the school nurse practitioner and by providing the child opportunities for decision-making regarding the utilization of health services. The setting permits study of the effects of active participation in new or emerging patterns of health services for children; and the development and evaluation of various test instruments and techniques for measuring the child's: level of development relative to the concepts of health and illness; personality characteristics, state of cognitive development; the school environment as a social reinforcement; and outcome measures relative to changes in attitudes, knowledge and behavior.

****Demonstration of a New Delivery System for Dental Care (HS 00785)**

C. McCallum
University of Alabama School of Dentistry
Birmingham, Alabama

6/1/69 - 8/31/74

(\$252,354)

This project involves the establishment of a simulated private practice situation on the university campus in Jefferson County by utilizing alternative staffing patterns. In addition, the intent is to document the cost-effective and productivity of a new delivery system.

To accomplish the objective, data will be collected and compared with the productivity and costs of dental teams comprised of other manpower mixes. If it is found that dental therapists can effectively help solve the undersupply of dental services, either in the solo practitioners office or in an organized clinic, this manpower model could be replicated in other parts of the country and the therapist utilized in dental components of community health delivery systems and in Health Maintenance Organizations.

****Optimal Control of a Network of Whole Blood Banks (HS 00786)**

William P. Pierskalla, Ph. D.
Northwestern University
Technological Institute
Evanston, Illinois 60201

5/1/72 - 9/30/74

(No Funding FY 74)

This project will develop an operational model for a network of whole blood banks utilizing perishable inventory theory. The development site will be a blood center in downtown Chicago. An optimal control of a network of blood banks will help meet demand for blood with less outdated, and lead to lower costs of processing, storage, transportation and record keeping.

****Experimental Medical Care Review Organization (HS 00798)**

Willard S. Costilow, M.D.
Mississippi State Medical Association
735 Riverside Drive
Jackson, Mississippi 39216

6/30/71 - 5/31/75

(\$298,150)

The purpose of this project is to develop and demonstrate organizational alternatives and systematic methods in the review of medical care.

The Mississippi State Medical Association's approach to this problem will be through a detailed analysis and review of abstracted data from hospital medical records. After comparison to computerized criteria, data will be printed in readable exception reports for professional review.

This project contributes directly to the National Center's goal of involving a provider group in the evaluation and assessment of medical care.

****Experimental Medical Care Review Organization (HS 00808)**

James Respess, M.D.
Albemarle County Medical Society
920 East High Street
Charlottesville, Virginia 22901

6/30/71 - 5/31/76

(\$231,420)

The purpose of this project is to develop and demonstrate organizational alternatives and systematic methods in the review of medical care.

This project will approach this problem through a series of cooperative efforts between the County Medical Society and faculty members of the University of Virginia. A series of controlled clinical studies, and problems reviewed by special review groups and regular review groups will constitute the primary direction of the project.

This project relates directly to the National Center's goal for involving organized medicine in the assessment of medical care.

****Experimental Medical Care Review Organization (HS 00812)**

Earnest C. Atkins, M.D.
 Medical Association of Georgia
 938 Peachtree Street, N.E.
 Atlanta, Georgia 30309

6/30/71 - 11/30/74

(\$54,032)

The purpose of this project is to develop and demonstrate organizational alternatives and systematic methods in the review of medical care. This grant is a short-term developmental grant for the purpose of drawing together those local organizations and providers and for the preliminary investigation of methods which might be appropriate in this geographical and socio-economical area. The study is concentrating on review of all nursing homes in the State.

This developmental grant will lead to the direct involvement of professional provider organizations in evaluation and assessment of medical care.

****Experimental Medical Care Review Organization (HS 00820)**

Alan R. Nelson, M.D.
 Utah Professional Review Council
 Salt Lake City, Utah 84105

6/30/71 - 8/31/74

(No Funding FY 74)

The key objectives of this project are: (1) to develop diagnosis-specific criteria for quality medical care; (2) institute pilot programs of pre-hospitalization and concurrent hospital review for the evaluation of the quality and efficiency of health care delivery; (3) develop claim forms which can be used to identify health care which deviates from accepted norms; and (4) link the review mechanisms to a program of continuing education.

Innovative models to answer the above stated objectives will have broad application for those interested in medical review as a means to insure quality medical care at moderate cost. This project relates to the National Center's goals of cost moderation and quality assurance.

****Analysis of Physician Price and Output Decisions (HS 00825)**

Frank A. Sloan, Ph. D.
University of Florida
Gainesville, Florida

6/1/72 - 5/31/75

(No Funding FY 74)

This project investigates physician decision-making in private practice. Three particular areas of physician decision-making have been selected for analysis: fee setting, hours spent in patient care, and non-price rationing mechanisms and their relation to physician productivity. Models will be constructed and estimated with econometric methods to explain these aspects of physician behavior. The estimated models will then be used to predict the effect of alternative public policies and other factors on physicians' fees, hours worked and productivity as a guide to policy making.

****Automated Ambulatory Medical Record System for HMO's (HS 00830)**

Shannon Brunjes, M.D.
Yale University
School of Medicine
New Haven, Connecticut 06510

1/1/72 - 12/31/75

(\$181,884)

The goal of this project is to increase the efficiency of operator and improve the quality of care of HMO's through the use of an automated record system. The objective is to develop a flexible automated medical record system for use in ambulatory practice which prepares tailored medical records encompassing problem-oriented, chronological, systems-ordered and other special reports. The system features the use of both non-technical language for patient verification and paramedic contact, and also correct medical language for use by physicians and other technical personnel. Generation of these reports requires a structured, multi-dimensional, meaning-oriented code for sign, symptom and laboratory information.

Cost-effectiveness will be emphasized with modular, flexible programs written for use on inexpensive minicomputers. The total system is especially applicable to the information handling requirements of emerging health maintenance organizations, and is both practical and cost effective enough to be easily transferable to them.

****Development of a Health Survey Reference Index (HS-00831)**

Leo G. Reeder, Ph.D.
University of California
Los Angeles, California 90024

4/1/72 - 3/31/75

(\$46,199)

This grant is intended to continue the work done on a health surgery

index of questionnaires and interview items used in health surveys, cross-references by subject areas; 2) a file of intact survey instruments; and 3) a reference library of reports resulting from health surveys. This work would be valuable to survey researchers for reviewing what has been done in health and health services, suggesting areas of needed research, constructing other survey instruments, improving the validity of survey methodology and increasing comparability of health survey findings. The grant facilitates the expansion of the index and permits computer processing of index materials which will be available to health survey researchers. Systematization of survey methodology and coordination of survey findings will increase the efficiency and quality of health studies relative to delivery, utilization and evaluation of health services.

****Family Nurse Practitioner Program (HS 00883)**

Shirley A. Ross
Indiana University Foundation
Post Office Box F
Bloomington, Indiana 47401

3/1/72 - 2/29/76

(\$206,701)

The objectives of this project include the preparation and evaluation of family nurse practitioners as providers of primary care in a variety of health care settings as a means of increasing health manpower productivity and improving health services.

Collaborative research will be undertaken in conjunction with that of all other Primer projects.

****Performance of Automated Diagnosis in Multiphasic Screening (HS 00838)**

Dankward Kodlin, M.D.
Kaiser Foundation Research Institute
Oakland, California

12/1/72 - 11/30/74

(\$47,372)

This project explores various techniques for the performance of automated diagnosis in the context of multiphasic screening. A pilot study has shown that it is possible to obtain performance characteristics (plot of sensitivity against specificity) for a variety of techniques, such as the Likelihood Ratio of Neyman or a Scoring System derived from that of Brodman and van Woerkom, within 3 minutes of computing time. Thus, it is proposed to compare not only different analytical techniques for a given disease and its set of variables but to repeat the inquiry over a variety of disease conditions sufficiently large to get a general idea concerning the potential of a diagnostic support system which will extend beyond the current level of providing the clinician with only basic information.

****Decision Analysis in Regional Health Care Planning (HS 00856)**

Richard E. Smallwood
Stanford University
Stanford, California 94305

6/30/72 - 9/29/74

(\$39,031)

This exploratory project will determine the applicability of decision analysis to regional health planning in the context of comprehensive health planning agencies. The Bay Area Health Planning Council, the local "b" agency, will be the test bed for the effort.

****Blood Collection and Allocation, Operational Studies (HS 00870, formerly
CN 00253)**

Alvin W. Drake, Sc. D.
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, Massachusetts 02139

6/15/66 - 9/30/74

(No Funding FY 74)

Earlier objectives of this project were basic research into advantages and disadvantages of regionalization of blood banks and of particular operating policies for aggregated blood banking systems. A new phase will inquire into three areas: (1) the place of frozen blood in future blood banking systems; (2) studies in donor motivation and recruitment; and (3) operational problems in the management of a regional system.

The investigators will be developing an operational and economic analysis of frozen blood systems, in conjunction with the frozen blood system being implemented shortly by the Massachusetts Red Cross Blood Program. In the second area, they would work closely with the Massachusetts Blood Program in an effort to understand what motivates donors, and to develop strategies for producing more positive decisions. In the third area, they will be working with the HBP in the area of central distribution and scheduling.

****The Pharmacist as a Primary Provider of Maintenance Care (HS 00872)**

Williar Stanley, M.D.
PHS Indian Hospital
Cass Lake, Minnesota

6/1/72 - 5/31/75

(\$16,415)

The primary objective of this study is to demonstrate whether or not the pharmacist can effectively contribute to direct patient care through the management of patients with chronic medical problems on long-term drug therapy.

Following appropriate medical work-up, and stabilization of medical problem, patients will be seen by pharmacist who will provide primary medical care utilizing predetermined, specified protocols under the direction of the medical staff.

The project studies the improved utilization of the pharmacist in a drug-related role, with the potential of transferral to like-settings (e.g., rural hospitals, municipal clinics, group practice settings).

****Ambulatory Health Services: Organization, Problems and Future Models
(NS 00874)**

Hilton I. Roemer, M.D.
University of California,
School of Public Health
405 Hilgard Avenue
Los Angeles, California 90024

6/30/72 - 5/31/76

(\$67,707)

To clarify the dynamics and trends including developmental processes, organizational structure and functions, and associated problems-- of organized ambulatory health services in the United States.

This will include a review and synthesis of literature and unpublished studies from a variety of sources (government, professional associations, and academic data files).

There is an increasing emphasis on structured organization and systematization of ambulatory care in health services R&D and in legislative proposals. This project will serve to illuminate the processes and problems involved in such organization.

****Family Nurse Practitioner Program (NS 00884)**

Janetta MacPhail, Ph.D.
Case Western Reserve University
2121 Abington Road
Cleveland, Ohio 44106

6/1/72 - 5/31/76

(\$156,980)

The purpose of this program is (1) to prepare registered nurses who have varied backgrounds of education and experience to function as primary health practitioners in a variety of health care agencies; (2) to determine any differences in preparation needed by nurses who have different backgrounds; and (3) to evaluate the effectiveness of the primary health practitioner in meeting the needs of people for primary health care and their acceptance by recipients of care and by all health professionals with whom the practitioner interacts.

****Primex-Family Nurse Training Program in Rural Areas (HS 00885)**

Gertrude Isaacs, D.W. Sc.
Frontier Nursing Service, Inc.
Hyden, Kentucky 41749

3/1/72 - 2/28/76

(\$108,000)

The objectives of this project are to demonstrate and evaluate a Primex-family nurse practitioner program in a rural area. Family Nurse practitioners have been prepared to provide primary health care as a means of increasing health manpower productivity and improving health services in a rural area. The model consists of: (1) a network of local services to identify and manage common, daily health problems, provide primary health care, and provide access for entry to secondary care; and (2) a broader network of consultant and secondary health services which are readily available for the more complex problems requiring specialty care.

Collaborative research will be undertaken in conjunction with that of all other Primex projects.

****Primex Demonstration Project Proposal (HS 00886)**

Sara K. Archer, Ed.D.
Associate Dean, School of Nursing
Vanderbilt University
Nashville, Tennessee 37203

6/30/72 - 5/31/76

(\$127,690)

The objective of the family nurse practitioner program will be to evaluate the effectiveness of registered nurses, with varied educational backgrounds, who have been prepared in a minimum period of time (12 months) to function independently in providing primary health care within designated situations. Family nurse practitioners are trained in history-taking; physical assessment and diagnosis; therapeutic management of patients; preventive screening; and health maintenance practices.

The evaluation research design and methodology to evaluate the quality, costs, access, and productivity resources and providing health care in this manner will be uniform for all family nurse practitioner projects.

With the current manpower shortage and unequal distribution of health manpower, the evaluation of this innovative approach to increasing access to health care while maintaining quality is of high priority to the NCHSRD.

****Evaluation of Alternative Models of Vision Care (HS 00888)**

Robert J. Weiss, M.D.
Harvard University School of Medicine
Cambridge, Massachusetts 02138

6/30/72 - 6/30/74

(No Funding FY 74)

The objective of this grant is to compare various models of vision care which are integrated within a comprehensive health care system, and to demonstrate which of these several models provide the most efficient, high quality services and most economical services as an integral part of the medical care system.

Five models will be utilized using different combinations of ophthalmologist, optometrist, technician and machines.

****Experiments in Communication of Medical Information (HS 00889)**

Jerome L. Schulman, M.D.
Children's Memorial Hospital
2300 Children's Plaza
Chicago, Ill. 60614

6/30/72 - 6/29/75

(\$68,051)

This project is designed to assess the effects on cardiac patients and their families of systematic variations in the methods of communicating medical information. The study is designed to experiment with controlled manipulation of the process and/or content of clinical communication along select dimensions.

the effectiveness of these experimental manipulations will be assessed by means of family interviews and questionnaires, and by observations of the communication interaction process. Outcome measures will include determinations of: level of knowledge, understanding, attitudes and compliance with medical advice.

This project relates to the NCHSRD's goals of patient education for the effective disease management.

****A Study of the Impact of Federal Health Policy (HS 00900)**

George A. Silver, M.D.
Professor of Public Health
60 College Street
Yale University
New Haven, Connecticut 06510

6/1/72 - 5/31/76

(\$214,584)

This project will assess the impact of Federal health policies, implicit in recent Federal health legislation, upon the State of Connecticut. The methodology includes review of Congressional intent, executive regulations, State legislation, effects on various health related institutions, and impact on community health and resources for health care through selected examples. The study will focus primarily on child health legislation with specific reference to inner city/suburban variations. This study is expected to offer a basis for a methodology for policy evaluation studies in other States, regions, or in the country as a whole. Positive results may establish this pattern of evaluation as suitable and more rapidly responsive in determining the value of Federally established health policies.

****A Study of the Effects of Medicaly Oriented Housing (HS 00903)**

Sylvia R. Sherwood Ph. D.
Director, Social Gerontological Research
Hebrew Rehabilitation Center for the Aged
Fall River Housing Authority
Fall River, Massachusetts

6/30/72 - 6/29/75

(\$57,968)

This is a research grant evaluate a low-income sheltered housing facility for the aged and physically disabled. It is located adjacent to a chronic disease hospital and oriented toward providing comprehensive and accessible medical care, while still offering independent to the residents.

The evaluation will be interms of the effect of such housing upon the residents need for entering a long term care facility, and will attempt to measure:

- social integration
- psychological well-being
- functional health in daily living
- need for hospitalization
- longevity

Residents of the facility will be compared with similar individuals who have applied for residence, but have not been admitted.

****A Health Index for the Evaluation of Health Services (HS 00905)**

Chin Long Chiange, Ph.D.
University of California
School of Public Health
Berkeley, California 94720

6/01/72 - 10/30/74

(No Funding FY 74)

The grantee proposes to develop a stochastic index of health constructed to assist in the evaluation of health services. General objectives include development of stochastic models of indices describing the state of health of a defined community, determination through population surveys of measurements entering such indices, and derivation of a minimum core of essential data for index construction. The grantee is currently performing the theoretical and mathematical work involved in developing the proposed index.

This program had direct bearings on the goals of the NCHSBD, and on the entire health field. A "Health Index" has the potential to serve as a mechanism for evaluating health care delivery systems at local, regional, and national levels, be they currently in existence or planned for the future.

****Computer Aided Medical Decision Making (HS 00911)**

William B. Schwartz, M.D.
New England Medical Center Hospital
Boston, Massachusetts 02111

6/30/72 - 6/29/75

(No Funding FY 74)

The goal of this activity is to increase physician productivity by extending his analytical and decision making capabilities. The objective of this project is to exploit the modern disciplines of statistical decision theory and computer science to develop new techniques on an interactive computer based system to assist in the diagnosis and management of important medical problems. This project will study the problem of diagnosis and management of acute and chronic renal failure, a problem with sufficient dimensions and complexity to pose issues and challenges typical of a wide variety of serious disease states.

****Develop Test and Evaluate Professional Review (HS 00929)**

George M. Boyden, M.D.
New Mexico Foundation for Medical Care
1009 Bradbury Drive, S.E.
Albuquerque, New Mexico 87106

3/1/72 - 2/28/75

(\$213,509)

The objective is to develop, test, and evaluate a state-wide peer review system to assure medical care quality and control Medicaid cost. The New Mexico Foundation for Medical Care has developed a peer review system to control costs and improve quality. The system is currently being applied only to the approximately 60,000 people in the State's Medicaid program. The system works as follows: (1) For each claim against the Medicaid system the physician or pharmacist when appropriate submits a claim form to the Dikewood Corporation (a subcontractor of the Foundation). (2) The claims form is checked for accuracy and then entered into the computer using an on-line CRT. (3) Using specific criteria each and every claim is reviewed by clerical personnel who can a) order the claim to be paid; b) reject or alter the claim and order it to be paid or c) send the claim for professional review. (4) Those claims that are identified by the clerical personnel are reviewed by physicians who can either reject, alter, or accept the claim. (5) The claims which have been accepted as satisfactory for payment are then paid and the computer sends the correct amount to each physician. (6) An appeal mechanism has been established for the physician.

****The Iowa Health Services Data Bank (HS 00933)**

Donald Dunn, MHA
Iowa Hospital Association, Inc.
Des Moines, Iowa

1/1/72 - 10/31/74

(No Funding FY 74)

The Iowa Hospital Association has secured the cooperation of almost all the hospitals in the State to establish a Health Services Data Bank in order to demonstrate and evaluate the feasibility of statewide computerized collection storage, and reporting of the Uniform Hospital Discharge Abstract Data Set and other selection clinical data from medical records of patients discharged from Iowa hospitals. The Veterans Administration is also participating through its hospital in Iowa City. These data will be reported to and used by those institutions who have responsibility for meeting the community need for health services. It will be shared with governmental and voluntary planning agencies seeking to shape a more effective health delivery system.

The value of comparative reports made to participating institutions in a form to permit more effective utilization review, health services planning, and use of medical record personnel will be assessed. Benefits attained by the training of key hospital personnel to insure accuracy of input and improvement of institutional and comparative reports will be evaluated. Finally, the Iowa project may permit evaluation of data interchangeability with other sites.

****Morbidity and Mortality Data in Health Planning (HS 00962)**

Carl J. Marienfeld, M.D.
University of Missouri
Surveillance Center
Columbia, Missouri 65201

6/1/72 - 5/31/75

(\$25,244)

The objective of this grant is to improve the reliability and establish the validity of illness and hospital use data accumulated by an existing hospital discharge reporting system. The data may be used in hospital and health services planning, evaluation, and related research, and to construct three population health models utilizing the data: (a) An illness surveillance model that will detect differential morbidity areas throughout the state. (b) An illness prevention model for constructing feasible programs tailored to the specific health hazards of populations. (c) Explore models, based on hospital morbidity data, that might provide levels of health measures for specified populations.

****Rhode Island Long-Term Care Information System (HS 00964)**

H. Denman Scott
Rhode Island Health Services Research, Inc.
56 Pine Street, Suite 600
Providence, Rhode Island 02903

6/1/72 - 11/30/74

(No Funding FY 74)

The purpose of this project is to develop, test and implement a state wide information system for long-term care, which would become part of a unified Health Services Data System (HCDS) already being developed for ambulatory and inpatient care. The underlying objective of the entire HSDS is to provide a capability to follow the patient through the health care system so as to be able to evaluate the total care the patient receives, and to assess the effectiveness of various innovations in the care system.

The long-term care will embrace (1) the facilities in which long-term care is provided, including nursing homes, mental hospitals, and (2) the agencies providing such care, including home health agencies, homemaker service agencies, and mental health clinics and (3) the patients using these services.

****Federal-State-Local Health Statistics System-Tennessee (HS 00965)**

Homer P. Hopkins, Ph.D.
Tennessee Department of Public Health
Nashville, Tennessee 37219

6/1/72 - 11/30/74

(No Funding FY 74)

The Tennessee Department of Public Health proposes to conduct research and development in three components of the Cooperative Federal-State-Local Health Statistics System: Health Interview Survey, Health Manpower Inventories, and Health Facilities Inventories.

The Health Interview Survey will attempt to estimate known health problems, health services received, and services desired but not received by the people of Tennessee.

The Manpower Inventory will determine basic demographic characteristics of the licensed health manpower in Tennessee. The information will be collected in connection with licensing and renewal procedures. The Health Facilities Inventory will determine basic information on licensed health facilities in Tennessee. The information will be collected as a requirement of health facilities licensing.

Findings from the three components will be combined in order to determine areas of greatest unmet health need and to assist in planning for the delivery of health services.

****Michigan Cooperative Health Information System (HS 00982)**

Theodore Ervin
3500 North Logan Street
Michigan Department of Public Health
Lansing, Michigan

6/1/72 - 5/31/75

(No Funding FY 74)

Study objectives are: (1) Technical development of statistical systems (Ambulatory Care, Health Manpower, and Vital Statistics) including expansion of data components and standardization of data elements and definitions; provisions of data to the National Center for Health Statistics in machine readable form; development of remote terminal access capability for major users. (2) Development and promotion of methodology regarding the use of data in planning, management, and evaluation of health programs, including improved access for users, development of linked local-area health information systems, and education and training programs. (3) Research and demonstration of solutions to special problems, such as confidentiality policy, data file linkage, and determination of health needs.

****The Training and Evaluation of Primex (HS 00985)**

Charles E. Lewis, M.D.
University of California at Los Angeles
Center for the Health Sciences
405 Hilgard
Los Angeles, California 90024

4/1/72 - 3/31/76

(\$157,811)

The objective of the family nurse practitioner (Primex) project is to evaluate the impact of these individuals on the productivity and efficiency of health care organizations, the quality of care provided, and their acceptability to colleagues and consumers.

The evaluation research design and methodology will be the same as that employed in the evaluation of all other Primex projects and will involve the investigation of dependent and independent variables which relate to successful performance, successful utilization, productivity, efficiency, quality, costs, and effective achievement of educational objectives.

The evaluation of this innovative approach to increasing access to health care while maintaining quality and containing costs is of high priority to the BHSR.

****New Orleans Cooperative Health Information System (HS 00991)**

Doris Thompson, M.D.
City of New Orleans Health Department
1300 Perdido Street
New Orleans, Louisiana 70112

6/1/72 - 9/30/74

(No Funding FY 74)

The objective of this project is to develop and coordinate comparable hospital and ambulatory patient care data from existing community data systems without superimposing a new data management entity.

The 24 month project period will be structured in two modes. An initial 12 month period to design, test and attain operational status of the computer programs in all participating agencies. The second 12 months will consist of systems operations and an evaluation of utility of the data to participating agencies.

This project relates to the Cooperative Federal-State-Local Health Statistics System in its efforts to coordinate data collection into a more effective system for producing continuing comparable data giving attention to data needed for the planning, operation, management and evaluation of health services delivery at the local level.

****Massachusetts Cooperative Health Statistics System (HS 01001)**

Charles C. Stover III, M.P.A.
Executive Office of Human Services
Boston, Massachusetts 02202

6/1/72 - 8/31/74

(No Funding FY 74)

The objective of this project is to develop or improve health statistics in the areas of long-term care and health facilities for the purposes of program planning, management, and evaluation, and for the determination of need for new services. The major techniques to be employed are maintenance of current patient status files, inclusion of quantitative service, staffing, and cost data.

A major effort will be made to assist those agencies providing direct services and data to utilize the tabulations and analyses returned to them for services management and quality control, as well as to attain a high level of completeness and accuracy of data submitted.

****Demand for Health Insurance - An Empirical Study (HS 01029)**

Charles I. Phelps
The Rand Corporation
1700 Main Street
Santa Monica, California 90406

6/30/72 - 1/31/75

(No Funding FY 74)

The project has two broad purposes: (1) to examine how consumers select health insurance and, (2) to investigate the relationship between health insurance and the utilization and price of medical care. This work uses economic theory and econometric techniques to study the joint demand for health insurance and medical care consumption.

This work should aid in evaluation the structure of alternative national health insurance programs from the consumers' points of view and in predicting services.

****Perinatal Mortality and Health Services Productivity (HS 01036)**

Llad Phillips, Ph. D.
University of California
Department of Economics
Santa Barbara, California 93106

6/30/72 - 8/31/74

(\$22,236)

The objective of this research is to generate a measure of real medical care output. Econometric analysis will be made of the relationship between inputs and outputs using both cross-sectional and time series hospital data. The influences of medical, socio-economic, and demographic variables on perinatal mortality will be separately shown. Empirical results will be used to help delineate the causes of the relatively high perinatal mortality rates among nonwhites and lower socio-economic classes.

The study's attempt to derive a measure of real output would seem to be of major importance in helping to establish criteria for efficiently allocating resources in the health services sector. While the results would be specific to maternity services output, they could be generalized to include other case types and assist in deriving more aggregate measures of health care output.

****Program Project in Evaluative Research in HMOs (HS 01040)**

Robert Huntley, M.D.
Georgetown University
Washington, D. C. 20007

6/30/73 - 6/20/75

(\$263,242)

The objective of this project is to conduct inter-disciplinary research to evaluate the utilization, cost, process, and quality of care, the acceptability and biologic outcomes of health services within several HMO's serving diverse patient populations in the Washington-Baltimore area.

The project is in its second year. At the end of this year, a free standing multi-institutional health services research corporation will have been established to initiate research activities in the priority areas determined by the participating institutions. During the first year, and continuing into the second year, work has been and it being conducted toward the development of compatible problem-oriented clinical records; a common minimum data-base, (to include demographic, socio-economic, diagnostic, utilization and fiscal information), common definitions, and a common problem coding system to be used by all the participating institutions.

****A Day Hospital Service in Rehabilitation Medicine (HS 01043)**

Victor Cummings, M.D.
Albert Einstein College of Medicine
Morris Park Avenue
Bronx, New York 10461

6/30/74 - 6/29/77

(\$222,800)

This study is designed to determine the feasibility of operating a day hospital service in the Department of Rehabilitation Medicine of a large municipal hospital serving a primarily disadvantaged population. The study population is two-hundred (200) day hospitals and two-hundred (200) hospitalized patients, seriously disabled adults, eligible for Medicare and Medicaid, residing in the hospital district serviced by the Bronx Municipal Hospital Center.

The day hospital patients and in-patients will be provided the same variety of therapies with the exception that the day hospital patients will be transported, five times each week, from home to hospital and return.

BHSE/HSDE has the primary coordinating responsibility for Federal support of this project that includes funding from BHSE (222,800); SSA/BHI and SRS.

****Automated Health Services (HS 01053)**

Homer B. Warner
Professor and Department Chairman
Biophysics and Bioengineering
University of Utah
Salt Lake City, Utah

6/30/72 - 6/29/75

(\$198,292)

The goals of this project are to improve efficiency and productivity in the delivery of a number of clinical health services through the use of automation. The objective is to utilize time-sharing system, oriented around two Control Data 3300 Computers, to service a variety of clinical projects. These include medical decision making from clinical data, using both Boolean and statistical methods, automated acquisition and interpretation of signals from a variety of laboratory sources, such as ECG and pulmonary function measuring devices, the development of some special tools for interpretation of two dimensional patterns of clinical value and the development and testing of a voice response system for remote access to medical data.

****Coded Language Information Processing (HS 01054)**

Morris Simon, M.D.
Beth Israel Hospital
Boston, Massachusetts

6/30/73 - 6/29/75

(\$202,531)

The goal of this project is to increase productivity in the radiology service area by facilitating the reporting process. The objective is to provide a computerized radiologic reporting system in which reports are immediately available for use after completion, reports are retrievable for review at any subsequent time wherever there is a computer terminal and patient data and radiologic findings are retrievable in complete detail for statistical analysis or other scientific purposes.

The system is based on the use of the Simon-Leeming Classification Code which enables the construction of a complete radiologic report entirely in code.

****Proficiency Test Development (HS 01056)**

James W. Truelove
University of Alabama at Birmingham
University Station
School of Community and Allied Health Resources
Birmingham, Alabama 35294

6/30/72 - 6/30/75

(\$75,705)

This project concerns continued efforts to construct, validate, and norm a set of proficiency tests for Emergency Medical Technicians. Additionally, it involves investigation of the implications for improving Emergency Medical manpower development resulting from "spin-off" findings of the study, such as functional task inventories, differentiation determined through evaluation between and among various practicing EMT's and possible findings of consistent incapacities to achieve adequately on identified portions of the proficiency tests. Earlier, under Public Health Service Grant 1R18HS01056-01 HSDG, an initial form of a proficiency test for EMT's was constructed. Validation and norming studies were done. During a six months extension to the earlier project, the basic test is being refined and administered to a definitive population (all practicing EMT's in the State of Alabama). From this study, it is expected that reliable norms for this population can be established; differentiation can be made between expectations for various levels (III's and II's for example); and the test instrument validity be further established.

****Community Care: The Chronic Disease Service Module (HS 01059)**

Sidney Katz, M.D.
Michigan State University
281 East Fee Hall
East Lansing, Michigan 48823

6/30/72 - 6/29/76

(\$693,002)

This project will demonstrate and evaluate the feasibility of a modular approach to the provision of continuing care needs to the chronically ill patient.

The project will build a series of chronic disease service modules, each consisting of a physician, a nurse or social worker, and two health assistants, the latter being a new type of health manpower designed to extend the effectiveness of professionals in an economical manner. The proposed service modules will be attached to various institutional providers--hospital, rehabilitation center, neighborhood health center, etc.--throughout the State of Michigan in an effort to demonstrate that they can be used economically as discrete sections of these institutions, responsible for services for the chronically ill, especially those who live at home.

This project relates directly to the National Center's interests in improving the quality of care and in meeting the needs of the chronically ill and aged.

****Physician Self Assessment Resource Center (HS 01065)**

C.H. William Ruhe, M.D.
American Medical Association
535 N. Dearborn Street
Chicago, Illinois 60610

6/30/72 - 8/31/74

(No Funding FY 74)

The purpose of this grant is to study the efficacy of various educational tools in assisting the physician in keeping abreast of new medical knowledge.

The AMA has subcontracted the major portion of this task to the University of Illinois Medical Center, Center for Educational Development. The various tools experimented with will then be tested out at AMA conventions.

continuing medical education and hence has great relevance to the field of Quality Assurance.

****Health Planning Using the Health Service Simulator (HS 01078)**

William S. Moore, M.D.
Texas Hospital Association
P. O. Box 4553
Austin, Texas 78765

6/30/72 - 8/31/74

(\$112,353)

The objective is to operationalize for planning purpose in several geographic areas a health services simulator to predict the demand for medical care of a population of 500,000 in terms of initial visits, admissions to hospitals, and patient days.

Using readily available data, the computer programs of the simulator will produce predictions of workload and resource allocations, allowing comparison of alternative plans including the effects of altered variables on the system. Such predictions will be evaluated in terms of actual experience in the various test sites.

****Newark Health Services Delivery Subsystem (HS 01090)**

Mr. James A. Buford
Department of Health and Welfare
Subsystem Division
Room 210, City Hall
Newark, New Jersey 07102

6/30/72 - 12/31/74

(No Funding FY 74)

The Newark subsystem effort has two major objectives: (1) combining the resources available from HSNHA and other sources to increase the impact of service on patient and family, and (2) preparing the organization and information base for a system. The ultimate objective is a comprehensive health care delivery system for the city of Newark. A central management unit is being established under the Director of the Department of Health and Welfare, and an Advisory Council has been appointed by the Mayor to assist the Department in its accountability to community interests.

The first phase in the development of a delivery system is focused on maternal and infant care and family planning programs. These will be integrated with the Family Health Center administered by the College of Medicine and Dentistry of New Jersey.

****Development of a Primary Health Care Subsystem (HS 01102)**

Stuart Pullen, Ph.D
York Health Corporation
118 W. George Street
York, Pennsylvania 17401

6/30/72 - 8/31/74

(No Funding FY 74)

The goal of this project is the development of a subsystem of primary health care for five city and three rural target areas. The focus is on the integration of mental health, alcoholism, and family planning programs into existing network health centers. The presently fragmented services will be tied into a comprehensive service package and new staffing patterns will be developed maximizing the use of a multi-discipline team approach. A management system for record keeping, intake, referral, and outreach is being developed. In addition to the integration and coordination of existing services, new financing and reimbursement mechanisms are being explored for potential long range viability of many services that are now being provided on a voluntary basis.

****Cost Data Reporting System for Nursing Home Care (HS 01114)**

Kenneth Garwood
American Nursing Home Association
1200 15th St., N.W.
Washington, D. C. 20004

1/1/74 - 12/31/75

(\$73,657)

The objective is to develop a system or systems for analyzing the costs of long-term care based upon a set of uniform cost elements that relate service to cost. The product of this research will be consistent with, and applicable to, the provisions of Public Law 92-603 which mandates that States will reimburse facilities on a basis reasonably related to cost as of July 1976.

****Cost Data Reporting System for Nursing Home Care (HS 01115)**

Helen McBride
American Association of Homes for the Aging
14th and F Streets, N. W.
Washington, D. C. 20004

1/1/74 - 12/31/75

(\$73,657)

The objective is to develop a system or systems for analyzing the costs of long-term care based upon a set of uniform cost elements that relate service to cost. The product of this research will be consistent with, and applicable to, the provisions of Public Law 92-603 which mandates that States will reimburse facilities on a basis reasonably related to cost as of July 1976.

****Data System for Hospital and Ambulatory Patient Care (HS 01116)**

Alan Humphrey, Ph.D.
University of Arizona
Arizona Regional Medical Program
5725 East 5th Street
Tucson, Arizona 85711

6/1/72 - 8/31/74

(\$15,091)

The objective of this project is to develop hospital and ambulatory care data in Pima County necessary for planning, implementing and evaluating health services programs. These data will be geo-coded using the address coding guide/dual independent map encoding (ACG/DIME) system,

****Long-Term Care Component Iowa Health Data System (HS 01132)**

Donald Dunn, MHA
Iowa Hospital Association, Inc.
Des Moines, Iowa

6/30/72 12/31/74

(\$16,440)

The objective is to (1) develop a uniform data system for long-term care patients and institutions that will permit effective planning, management and licensing of long-term care services, and (2) determine the feasibility of implementing collection of long-term care data on a state-wide basis in Iowa.

The method used will (1) synthesize a minimum data base which will meet the major needs of Iowa's official and voluntary long-term organization; (2) develop forms and collection methods; (3) develop statistical methods for producing information for use in comparing patient status, patient potential, patient needs and the institutional environment; (4) pre-test data items; (5) analyze data obtained.

The study is expected to produce recommendations with respect to a minimum data base; the possibilities of linkage with the acute care hospital data system in the state. The effort on this project is intended also to interact with the long-term care data components being developed under the Cooperative Federal-State-Local Health Statistics program.

****Home Care: An Alternative to Institutionalization (HS 01134)**

Jack Leff
Commonwealth of Massachusetts
Executive Office of Elder Affairs
18 Tremont Street
Boston, Massachusetts 02108

6/30/72 - 11/30/75

(\$260,000)

This project is joint-funded with Administration on Aging, with BHSR as the lead agency. This grant proposes to demonstrate that a community based home care program of coordinated health, social and other support services, drawing on the same source of funds now used to pay for institutionalization (Medicaid), can provide a most cost effective option for the care of the elderly. The study is expected to show that: (1) the elderly prefer to receive services in their own home, (2) a model of coordinated maintenance services can prevent deterioration and eventual institutionalization, and (3) Medicaid payments can be kept at no more than the present level even though they cover this alternative.

****Corporate Decision Making in Health Sector (HS 01145)**

Thomas W. Bice, Ph.D.
Johns Hopkins University
615 W. Wolfe Street
Baltimore, Maryland 21205

6/30/72 - 6/30/75

(No Funding FY 74)

The objective of this study is to provide a comparative description and analysis of the formation, development, and operation of corporate bodies in the health sector. THE investigators will conduct a limited number of site visits to communities in which corporations established by the Experimental Health Delivery System (EHSDS) program are located. The purposes of these visits include: (1) to measure quantitatively and qualitatively the progress which the EHSDS corporations have made; (2) to determine how processes internal and external to the corporation influence the establishment of priorities and the implementation of programs; (3) to identify the major obstacles encountered in the establishment of priorities and implementation of programs.

****Health Administrative Functions and Roles: Study of and Training for (HS 01146)**

Char

William I. Dowling, Ph.D.
Association of University Programs
in Hospital Administration
One Dupont Circle, Washington, D.C. 20036

5/1/73 - 4/30/76

(\$80,581)

The objective of the project is to improve the training of administrative personnel for health services delivery organizations. The general approach is to define or describe the administrative role (i.e., the activities or functions that comprise the administrative role) in different delivery organizations, to determine how organizational characteristics affect (i.e., constrain, influence, shape, etc.) the administrative role, and to evaluate, based on the findings of the above work, the knowledge and skills needed to effectively perform in the administrative role.

****Hospital Productivity and Costliness (HS 01152)**

Richard Cooper, Ph.D.
Rand Corporation
Santa Monica, California

6/1/73 - 8/31/75

(867,125)

This research proposes a two-year development of cost and production functions for California hospitals. A cost function will be used to establish whether a particular hospital is more or less costly than the average, while the production function will be used to explain why such a hospital is more or less costly. Multiple regression analysis of cross-sectional/time series data from all non-Federal hospitals in California will be used for most of the estimation. Various output measures (employing a number of weighting schemes for use mix) will be used to test for robustness (with respect to output definition) of the estimates.

An additional output from grant will be the use of the analysis performed, and methods developed, to suggest to the State of California Hospital Disclosure Act. In this regard, RAND and Dr. Cooper are acting as consultants to Hospital Education Foundation of California under NCHSRD Demonstration Grant HS 01104, to develop the guidelines for data collection under the Hospital Disclosure Act.

****An Approach to the Assessment of Long-Term-Care (HS 01162)**

Paul B. Densen, Sc.D.
Center for Community Health & Medical Care
Harvard University
643 Huntington Avenue
Boston, Massachusetts 02115

6/30/72 - 6/29/75

(No Funding FY 74)

The objective of the proposed research is to develop and demonstrate a system for assessing the status of patients in long-term care so that their social, psychological and physical needs are met in the most effective way possible. The system provides information which can be used for decisions about the type and place of care appropriate to patients' needs and which is sensitive to changes in the status of patients over time so the effect of care programs can be evaluated. In addition to patient oriented descriptors, information about the process of decision-making and about the characteristics of the health care environment will be obtained.

****Time in the Demand and Supply of Medical Care (HS 01165)**

Alphonse Holtmann, Ph.D.
SONY at Binghamton
Albany, New York

3/1/73 - 2/28/75

(\$26,537)

The objective of the proposed exploratory study is an empirical analysis of the importance of consumer's time as a determinant of the demand for medical care. Data to be used in the analysis were obtained from a community health survey performed by NY-Penn. Health Planning Council, Inc. Relationships between waiting time, other known determinants of medical care demand, and the demand for various types of medical care will be explored. As price plays less of a role in determining medical care demands, non-price determinants of demand such as time become very important in determining efficient and equitable allocation. This project is thus of high priority.

****Help-Seeking Experience and Agency Characteristics (HS 01169)**

James E. Greenley, Ph.D.
University of Wisconsin
8144 Social Science Building
Madison, Wisconsin 53706

6/13/73 - 12/14/74

(\$21,000)

The project is a feasibility study with the following goals: (1) to investigate the rejection and referral experience of adult and child applicants to agencies and the extent to which the experiences are influenced by the agency organizational characteristics, (2) to estimate the impact of organizational characteristics of agencies on rates of treated prevalence, (3) to investigate the relationship between the applicant's help-seeking persistence, prior referral, rejection, and service experiences, the extent to which help-seeking persistence is mediated by the applicant's perception of the nature and seriousness of his problem, (4) to assess the relationship between applicant satisfaction and the organizational characteristics of the agencies, (5) to examine the cumulative effects of applicant characteristics on their help-seeking careers, and (6) to investigate agency cooperation around multi-problemmed individuals and organizational characteristics of agencies.

****Credentialing Health Personnel By Licensed Hospitals (HS 01193)**

W.R. Tucker, M.D.
 Rush-Presbyterian-St. Luke's Medical Center
 1753 W. Congress Parkway
 Chicago, Illinois 60612

6/30/72 - 9/30/74

(No Funding FY 74)

This study will evaluate the feasibility of the institutional licensure concept, utilizing licensed hospitals, with their concomitant in-house credentialing capability, as a supplement or alternative to existing methods of licensing, certifying, or registering dependent health personnel. The personnel categories involved will include various traditional as well as new types of allied health roles, but will not include physicians or nurses.

The initial phase of this study inventorying of the technical and professional job categories in the network hospitals utilized. When this is completed, selected categories will be chosen for an in-depth study and analysis of tasks performed, skill requirements, and educational requirements. This type of analysis might allow for consideration of the potential transferability of individuals credentialed in a given institution.

****Computer-Based Consultation In Care of Critically Ill (HS 01195)**

John H. Siegel, M.D.
 SUNY at Buffalo
 Research Foundation of SUNY
 Albany, New York 12224

6/30/72 - 5/31/76

(\$131,188)

The goals of this project are to reduce morbidity and costs of care for critically ill patients by improving their clinical management. The objective of this project is an attempt to explore the capability of modern data processing technology, to assist the physician in the diagnosis and care of the critically ill patient. By serving as an information compiler and organizer of clinical and biologic data, the computer can serve as a means of providing the responsible doctor in a municipal or community hospital setting with better understanding of the relevant clinical and physiologic patterns manifested by his critically ill patients.

It also can provide a method of getting authoritative consultation to him on a continuing basis. Of equal importance to this concept is the ability for the physician in a smaller center to communicate through the system with a senior consultant on those problems to which answers cannot easily be programmed.

****The Vermont Model Health Statistics System (HS 01197)**

Alan E. Gittelsohn, M.D.
Cooperative Health Information Center
of Vermont, Inc.
Medical Center Hospital of Vermont
Deanebriand Unit, Room 5130
Burlington, Vermont 05401

12/1/72 - 11/30/75

(\$320,672)

The three major goals of the project are: (1) to develop a governance mechanism for Cooperative Health Information Center of Vermont; (2) to refine data input and analysis; and (3) to develop a system of data users. The basic function of the Center is to integrate and analyze health information and then feed it back to users. Work in the first year includes development of a data base reflecting the experience of the total population of the State for hospital care, health manpower, health facilities, health expenditures, demographic and vital statistics. Building upon hospital discharge data from all Vermont hospitals and from hospitals in Hanover, New Hampshire, and Albany New York, the system will be maintained and organized for collection and input into the data bank. An inventory of physicians has been developed by identifying admitting physicians from hospital records or from Blue Cross or Medicare forms. More systematic methods for annual update of physician inventories are being developed. Health facilities data are currently obtained through informal reporting.

****Implementation of a HUNPS System to a Decentralized HMO (HS 01202)**

Daniel E. Billmeyer, M.D.
Physicians Association of Clackamas County
18600 S.E. McLaughlin Boulevard
Gladstone, Oregon 97027

4/1/73 - 5/31/75

(\$165,090)

The objective of this study is to do a pre-implementation evaluation focusing primarily on a detailed design of the study, gathering of base-line data, profiling of an existing decentralized HMO consisting of single practitioners, small clinics and other providers including pharmacists and physical therapists. Areas to be evaluated will include automated medical record capabilities in physician and clinical offices. Studies will be conducted in the field of data reduction and standardized formats for specific users and subsystems of health care.

****Evaluation of Remote Radiographic Communication (HS 01210)**

William J. Wilson, M.D.
University of Nebraska Medical Center
Omaha, Nebraska 68105

6/30/73 - 6/29/75

(\$104,787)

The purpose of this grant is to implement and evaluate a commercially available slow-scan television system for transmitting radiographs between the small rural community of Broken Bow, Nebraska, which has no radiologist, and the Department of Radiology at the University of Nebraska. Multiple images will be stored on a video disc before being read by the radiologist.

****Child Health Care Delivery - A Comparative Evaluation (HS 01220)**

Nutya San Agustin, M.D.
Montefiore Hospital and Medical Center
Bronx, New York 10467

6/30/73 - 6/29/76

(\$95,659)

This research has been designed to assess the relative effectiveness of two systems of child health care delivery: one providing care exclusively to children, and the other serving both children and their parents. Families for both systems will be drawn from a common geographic area in the south-east Bronx, with stratification and ranking of the population of households in the target area according to selected criteria. Various types of data on the patients will be the basis for analysis of several variables which are viewed as having parental component relationship (PCR) in that the effects of personal involvement, health education, familiarity and trust in the delivery system are involved.

This project will provide insight into the question of optimal health services delivery.

****Division Analysis for Concurrent Utilization Review (HS 01222)**

Don C. Holloway, Ph.D.
University of California
Berkeley, California

6/29/73 - 6/29/76

(\$145,542)

The objective of this project is to develop and evaluate a prototype health services utilization review system. A system will be designed for reviewing a patient's use of hospital resources while the patient is still hospitalized, such that this concurrent review system can complement a retrospective review system. The application of decision analysis, set of operations research techniques, will be tested for use in deciding on the appropriate use of hospital resources.

****Alternate Regulation of Health Personnel (HS 01233)**

Richard L. Storrer, M.S.
Hospital Educational and Research Foundation
1200 Camp Hill By-Pass
P. O. Box 608
Camp Hill, Pennsylvania 17011

5/1/73 - 6/29/75

(\$74,955)

Institutional licensure has been proposed as a regulating mechanism which would more accurately reflect the organizational setting of much of health care delivery today. This project explores the feasibility of the concept of institutional licensure as an alternative or supplement to the present individual credentialing system as the regulatory means of assuring health personnel competence. Specifically, this project will explore the feasibility of the employing hospital as the institution with regulatory responsibility for all personnel including those whose regulation is now delegated elsewhere and who are beyond the current legal operational responsibilities of the hospital.

****Diffusion of Innovation in the Hospital Industry (HS 01238)**

John Rapoport, Ph.D.
Mount Holyoke College
South Hadley, Massachusetts 01075

6/30/73 - 6/29/75

(No Funding FY 74)

This is an exploratory research grant which will use the case study method to investigate the economics of the diffusion of an innovation in the hospital industry. A single innovation will be selected in order to: 1) provide and historical description of the diffusion process concentrating on the rate and geographical pattern of diffusion, 2) investigate the factors influencing the decision of a hospital to adopt the new technology, and 3) examine the importance for the adoption decision of the interaction of hospitals within a regional market area for hospital services. The sample of hospitals to be studied will most likely be drawn from the New England region.

****Affiliation with Providers and Use of Medical Care (HS 01241)**

Albert F. Wessen, Ph.D.
Brown University
Providence, Rhode Island

6/30/73 - 6/29/75

(\$33,308)

The study is interested in gathering data on a missing link in knowledge about health care utilization. What is the effect of the differing affiliation of patients with providers of medical care? What and how are providers selected? The study will develop the concept of affiliation in terms of seven parameters: identification, setting, structural dominance, specificity-generality, external constraints, history and salience. This conceptual structure forms the basis for the development of a set of hypotheses which test the general provision that "the nature of provider-patient affiliations is a determinant of the extent of use of health services."

The investigator will use a telephone survey to do a random sample of 3,000 households in Rhode Island.

****A Project to Improve Health Care Effectiveness (HS 01243)**

Kenneth A. Platt, M.D.
Colorado Foundation for Medical Care
Denver, Colorado

6/30/73 - 6/29/75

(\$156,013)

The purpose of this project is to continue the development of the Colorado Foundation for Medical Care as a prototype for an organization capable of creating, operating, and improving a statewide system for continuous review, improvement, and cost containment of the level of patient care. This effort is basically a continuation of a contract with CPNC funded by BHSR to obtain voluntary participation of health service organizations in a community-wide restructuring of health services in Colorado. Two hundred model treatment programs have been developed in formats suitable for machine processing in the peer review process. The effectiveness of these programs will be evaluated through formal testing and practical experience and the role of continuing education in health care effectiveness will be examined. Also planned is the computer-based technical support system which would cover the state as originally proposed, but has been deferred until the specifications become more solidified.

****Health Services for Long-Term Care (HS 01250)**

Charles D. Flagle
Johns Hopkins University
School of Hygiene and Public Health
615 North Wolfe Street
Baltimore, Maryland 21205

5/1/73 - 4/30/75

(\$235,162)

This project is modifying and testing the Collaborative Patient Assessment Instrument (CPAI) to determine patient profiles, assess patient care needs, and develop the protocol for producing care plans. Appropriate care plans are being developed and compared with observed patterns of service rendered to develop guidelines for review of the appropriateness and extent of services provided. Refined guidelines will be implemented in selected sites to test regional generality and applicability for PSRO.

****Long Term Care Statistical Reporting System (HS 01277)**

Donald J. Davids
Chief, Records and Statistics Section
Colorado Department of Health
Denver, Colorado

6/30/73 - 9/30/74

(No Funding FY 74)

This project proposes to design, test, and implement a long-term care coordinated statistical system which will provide data for use by long-term care facilities, planning groups, federal, state and local agencies, and professional organizations in order to help them carry out their responsibilities in providing long-term care. The long-range goal is to improve the quality of long-term care facilities and their care patients.

Data will be collected on characteristics of patients and facilities, service and care needs, and service costs. Minimum data sets and definitions will be developed. Cross-matching of patient and facility data will determine if the right person is in the right place at the right time in terms of reaching his uppermost level of potential in rehabilitation and self-care.

****Nassau County Cooperative Health Statistics System (HS 01285)**

Raymond J. Murray, M.D.
Nassau County Department of Health
240 Old County Road
Mineola, N.Y. 11501

6/30/73 - 9/30/74

(No Funding FY 74)

This project is limited to two components: Hospital Care and Long-Term Care. The objectives are:

1. To develop a method of central reporting, processing, and dissemination of statistics relating to the utilization of health services.
2. To provide data concerning the total population so that overall health systems may be developed and evaluated.

The input data will be derived from: hospital discharge abstracts, existing Medical Assistance Payment Programs, P.A.S., hospital computer output, encounter forms and surveys. This data will be processed by the Nassau County Central Computer Facility.

****Health Data Systems - Georgia (HS 01293)**

Ernest Atkins, M.D.
Medical Association of Georgia
Atlanta, Georgia

6/1/73 - 8/31/74

(No Funding FY 74)

The Health Data System has three components: Ambulatory Care Statistics, Long-Term Care Statistics, and Hospital Care Statistics. Each is built on a base of data necessary for the evaluation of quality of care in accordance with criteria developed by our Experimental Medical Care Review Organization (EMCRO). The Ambulatory Care Component will utilize and encounter document prepared in triplicate which will serve as a medical record, an order for tests, and a claims form. The Long-Term Care Component will utilize a modified EMCRO Nursing Home Abstract. The Hospital Care Component will utilize a modified EMCRO Hospital Discharge Abstract which will be merged with the new Medicare claims form. Federal, State and local needs for data for planning and other purposes will be met by the Health Data System's three components through the generation of machine readable tapes.

****Cooperative Health Data Development for Planning (HS 01296)**

Raymond D. Hasbald
Wisconsin Department of Health and Social Services
Madison, Wisconsin

6/1/73 - 8/31/74

(No Funding FY 74)

To establish a comprehensive cooperative health data system for the State of Wisconsin by adding data on emergency room services and extended and care facilities.

Through development of standard definitions of data elements within a prescribed data set, and documentation of procedures and formats; a system for collecting hospital emergency room information and patient data from nursing homes will be initiated. Data components (health facilities, health manpower, hospital care, hospital emergency room encounters, long term care) will be linked for maximum utilization in health planning and management.

The research plan consists of four parts: (1) development of a catalog of services by pathology, through analysis of providers by services actually provided within specific facilities; (2) development of multiple-element profiles of presenting problems from patient, related person, and therapist; (3) definition of a per unit measure of services; and (4) development of a system for collecting evaluation data after termination of treatment.

****Population-Based Quality Assurance in HMOs (HS 01310)**

Alvin I. Mushlin, M.D.
The Johns Hopkins University
Charles & 34th Streets
Baltimore, Maryland 21218

6/30/73 - 6/29/76

(\$102,344)

This project proposes to develop a quality assurance system in a small HMO, Columbia Medical Plan. The quality assessment system to be employed by this HMO is unique in concept since it is based upon data obtained from a combination of an encounter form, community survey, and patient interview. It does not involve the examination of the medical record. The quality assessment system is based on determining appropriate levels of access, the percentage of patients in the community with specific conditions requiring rendered services who have not been properly diagnosed, and the development of criteria and standards for appropriate levels of outcome for patients with specific conditions. After the level of quality is determined using the above technique, relevant information will be fed back to health providers in order to improve the quality of care rendered at this HMO. This feedback process will be carefully evaluated.

****A University - Hospital HMCRO (HS 01320)**

Charles E. Lewis, M.D.
The Regents of the University of California
405 Hilgard Avenue
Los Angeles, California 90024

6/30/73 - 6/29/76

(\$231,551)

This project proposes to develop a quality assurance system in an academic medical center. This system will depend upon the development of a detailed set of process and outcome criteria for 10 diseases in each of four specialty areas (medicine, pediatrics, surgery, ob-gyn). One-half of the diseases to be selected will be typical of esoteric diseases, while the other half will represent common conditions. Outcome criteria and standards will be set independently by groups of consumers and providers. The results of the two different criteria sets will be compared. Finally, the criteria will be applied to actual cases at U.C.L.A. in a cyclical feedback manner in order to judge their effect in improving quality of care. This project will be evaluated by a team to be selected from the U.C.L.A. School of Public Health.

The project fits well into the National Center's interests in improving the quality of care since it will examine the ability of an academic center to assess and assure the quality of care received by patients contained in its hospitals. It will also extend knowledge about the development of outcome criteria by helping to determine the role of the consumer in establishing such criteria.

****Economic Determinants of Ambulatory Care Use (HS 01329)**

David S. Salkever, Ph. D.
Johns Hopkins University
Baltimore, Maryland

7/1/73 - 12/31/74

(No Funding FY 74)

The project proposes to examine the effect of selected economic variables on (1) the decision to seek care in response to health problems and (2) the actual obtainment of preventive care in terms of a general physical examination. Econometric analysis will be made of WHO/ICSHCU survey data for eight of the twelve international areas included in the survey. Inter-country comparisons will be done to show the relative impact of household income, insurance coverage, occupation, sick-leave coverage, disability insurance, accessibility of health care and selected socio-demographic variables (education, age and sex) on utilization behavior.

The influence of the severity of the health problem on seeking care will be controlled for in order to assess the interaction between severity and the economic/socio-demographic characteristics of the individuals involved. Investigation of the decision to obtain a physical exam will attempt to control for the reasons which motivated the decision. Elaboration of existing administrative requirements for physical exams, and the influence of health status and non-preventive utilization on obtaining an exam, will allow for a more direct measure of the effect of economic factors on the use of preventive services.

****Stability of Physician Staff in Large Organizations (HS 01332)**

Donald L. Madison, M.D.
University of North Carolina
Chapel Hill, N.C. 27514

6/30/73 - 12/31/76

(\$78,033)

This research program on physician stability (i.e., recruitment, satisfaction and retention) includes three concurrent projects: a comparative study of determinants of physician stability in a national stratified sample of 42 large organizations (group practices); an analysis of physicians in 31 centers of the nation's largest prepaid medical group;

****Family Nurse Practitioner in North Carolina - Primex (HS 01333)
(Formerly HSH 110-71-216)**

Lucy H. Conant, Ph. D.
University of North Carolina
Chapel Hill, North Carolina

6/28/71 - 6/26/76

(\$143,400)

The objective of this project registered nurses to provide primary health care to individuals and families in health centers, clinics, physicians' offices, industries, homes and other ambulatory care settings.

The practice of the PRIMEX nurse is to be community oriented, related to needs, concerns and priorities of the consumers. As the BNSR moves into the operational phase of the new community health delivery systems and the highly organized group practices represented by the Health Maintenance Organization concept, the PRIMEX nurse will be an important manpower component.

Collaborative research will be undertaken in conjunction with that of all PRIMEX projects. The relevance to the Bureau's goals in developing new types of health services manpower is primary to this project.

****Family Nurse Practitioner Program (PRIMEX) (HS 01366, formerly
HSH 110-71-215)**

Eleanor Lambertson,
Cornell University Medical College
New York, New York

6/24/71 - 6/23/76

(\$172,460)

The purpose of this project is to develop and offer an educational and clinical practice program to prepare registered nurses to assume principal responsibility for the primary health care of the elderly and the chronically ill.

The family nurse practitioner will function in complementary care roles with physicians, providing nursing services in ambulatory patient care facilities and other community settings outside of the hospital. With operational development of community health systems and Health Maintenance Organizations, redistribution of tasks among members of the health care team will be imperative.

Collaborative research will be undertaken in conjunction with that of all of the other PRIMEX projects.

****Biometric Methods for Health Services Research Data (HS 01381)**

Jay N. Glasser, Ph.D.
School of Public Health, University of Texas
P.O.Box 20186, Astrodome Station
Houston, Texas 77025

6/30/73 - 12/31/74

(No Funding FY 74)

The project proposes to test the statistical properties and empirical utility of a set of analytic techniques in the field of health services research. The techniques will be tested through thier application to a unique set of data obtained from the Kaiser (Portland) Health Services Research Center.

****Telecommunications in a Health Care Delivery System (HS 01385)**

Vernon Showalter
Bethany Brethren Garfield Park Community Hospital
Chicago, Illinois

2/15/74 - 2/14/76

(\$93,711)

It is the purpose of this grant to explore the utility of a switched visual communication system (Picturephone) in solving the communications problems of a large health care network in an inner-city area, including two community hospitals, three neighborhood health centers, and five drug rehabilitation centers. The Picturephones are used for supervision (e.g. of an emergency room nurse practitioner), consultation between health care providers, and administrative communications. The objectives of the research include the development of an inventory of tasks augmented by video communication, and analyses of the cost-effectiveness of this communication modality.

****Laser Mediated Telemedicine in Anesthesia (NS 01390)**

Joachim Gravenstein, M.D.
Case Western Reserve University
Cleveland, Ohio

3/1/74 - 2/28/77

(\$194,896)

The purpose of this grant is to expand an existing laser mediated two-way visual telecommunication system between hospitals in Cleveland. The original link, between the V.A. Hospital and Case Western Reserve University, is used to permit an anesthesiologist at the University to provide back-up support to a nurse anesthetist at the V.A. The second link, between a small under-staffed inner-city hospital and the University will be used to provide back-up support and training in pediatrics, anesthesia, and the intensive care unit. Analysis and evaluation efforts are focused on problems of scheduling, cost-effectiveness, and medical outcome.

****Optimal Nursing Assignments Based on Difficulty (NS 01391)**

Louis E. Freund, Ph.D.
University of Missouri
Columbia, Missouri 65201

6/30/73 - 6/29/75

(\$163,837)

A technique for optimally assigning nursing personnel to patient care responsibilities will be developed, tested, implemented, and evaluated. The technique will be based on a methodology for obtaining a measure of the difficulty of a nursing assignment which reflects the task groups and condition of patients included in the assignment. Questions regarding the capacity for difficulty will be investigated, especially as capacity relates to the proportion of time spent in activities and an index of the quality of nursing care. A nursing personnel assignment algorithm will be developed which will be useful at all levels of personnel assignment decision making within the organization. Personnel acceptance of the technique after implementation and its cost effectiveness from the standpoint of personnel savings or increased patient care will be determined.

****East Harlem Broadband Health Communications Network (HS 01392)**

Carter Marshall, M.D.
Mt. Sinai School of Medicine of the
City University of New York
New York, New York

6/27/73 - 6/26/75

(\$152,963)

It is the purpose of this project to explore the feasibility of providing physician and administrative support to a primary pediatric clinic using a two-way cable television system. The two sites involved are the Mount Sinai Medical Center and the Wagner Child Health Station in East Harlem, about a mile and one-half away. Nurse practitioners deliver most of the care at the clinic and also function as coordinators of two teams of community health workers. The system is used to provide pediatric consultation to nurses when no physician is on site, and for "teleclinics" in orthopedics and psychiatry. The evaluation includes both descriptive and economic analyses.

****Medicine Use (HS 01408)**

David L. Babin, M.D.
Georgetown University
Washington, D. C. 20007

6/30/73 - 12/31/74

(No Funding FY 74)

The project is designed to provide information from, and analysis of data obtained through a 1971 World Health Organization study of comparative international health service, in the area of drug use in the United States. It will characterize groups within the society having differential demands for drugs and examine the interaction effects of drug use within families as well as by the analysis of substitutability of nonprescribed drugs for prescribed drugs.

Data already available to the investigator will be organized, computed, analyzed and reported by the use of intensive statistical manipulation of the raw data tap.

The project complements other studies under way with the NIMH and answers questions for which policy decisions may now be made.

****Comparative Study of Health Program Design Strategies (HS 01413)**

Paul C. Butt, M.D.
Health Planning Council, Inc.
Madison, Wisconsin

7/1/73 - 9/30/74

(No Funding FY 74)

The proposed research will compare three vastly different design methods and an "unstructured" approach in four distinctly different, operating, health organizations. The principal hypotheses in the research are: to find out the relative ability of these methods to produce good results and to isolate those components of a particular method which have the greatest impact on the results achieved. Both the health organizations and health design problems will be classified to determine if particular factors associated with the organizations or problems that tend to favor one design method over another. Lastly, the issue of "consortium planning" (such as the cooperative planning requirements in HNP's and CNP's) will be considered.

****Housing and Health Care Paths of Dependent Elderly (HS 01425)**

Ellen Biddle, Ph.D.
Center for Research in Social Behavior
University of Missouri
111 Stewart Road
Columbia, Missouri 65201

6/30/74 - 6/29/75

(\$27,399)

This project is joint-funded with Administration on Aging, with Aol as the lead agency. The grant proposes to demonstrate that personal and social circumstances attending entry into full care facilities provide a context within which the quality of care will be in part defined. Another thrust will be toward analyzing less-than or quasi-institutional facilities: boarding houses, old hotels populated by the elderly and families of relatives that become expanded households with the addition of previously independently-domiciled elderly. The supplemental proposal plans to increase the size of the sample of expanded households and boarding homes (operators, their residents and residents' families) and to add a small town sample of expanded families and of boarding/nursing home residents.

****Assessment of Prospective Reimbursement (HS 01427)**

N. Benman Scott, M.D.
 Rhode Island Health Services
 Research, Inc. (SEARCH)
 56 Pine Street
 Providence, Rhode Island 02903

6/30/73 - 12/31/74

(No Funding FY 74)

The project will develop methodologies for evaluating a system of prospective budgeting, rate determination and reimbursement for hospitals which was established for the 14 general short-stay hospitals in the State of Rhode Island in 1970. The system will be evaluated for its effectiveness in containing costs and its impacts on, and trade-offs with other crucial variables such as length-of-stay and casemix.

The methodology to be developed will permit comparison of these variables for Rhode Island over time and with a matched sample of hospitals located in other areas, and serve as an approach to evaluative efforts in other areas. The project is relevant to the priority effort being undertaken within the Department to experiment with, and evaluate prospective reimbursement schemes.

****Experimental Health Services Delivery Subsystems (HS 01429)**

Stephen A. Coray, M.D.
 Ventura County Health Services Agency
 350 Hillmont
 Ventura, California 93003

6/30/72 - 10/31/74

(No Funding FY 74)

This subsystem consolidates the merger of four county agencies into one health services agency with an interest in the integration of services provided by the county with those provided by the private sector. The subsystem is expected to integrate all county health service providers in the target area into a single health services delivery network. Access to this network will be through a series of community health referral and service centers. A single data system for the county will generate management information useful in program evaluation and planning for improved services delivery. These primary objectives are to be achieved through four program activities: an outreach social health component; a peer review component aimed at assuring quality of medical care; a research and evaluation effort designed to assess and evaluate the current health delivery system; and the data concerning all health and health related services delivered through participating public and private health providers.

****Longitudinal Study of Attitude Changes in Physicians (HS 01430)**

Rosalie E. Paiva, Ph.D.
Southern Illinois University
School of Medicine
Carbondale, Illinois 62901

8h

6/30/73 - 10/31/74

(No Funding FY 74)

The objective of this study is to document attitude changes among medical students as they progress through medical school, internship and residency, and out into practice, particularly with regard to the care of patients with cancer but also utilizing a battery of standard psychological tests. The goal is to establish baseline data on presenting attitude on entrance, which attitudes change and when, and to develop hypotheses regarding interventions to alter in a positive direction those attitudes which would improve the quality of care they provide as physicians.

****Blood Donor Motivation and Recruitment (HS 01440)**

Alvin Drake, Sc.D.
Massachusetts Institute of Technology
Room 24 - 215, 77 Massachusetts Avenue
Cambridge, Massachusetts 02139

6/1/74 - 5/31/77

(880,224)

The activities to be undertaken under this grant are : (1) Household surveys of donors and potential donors to learn their information sources, attitudes, reasons for their initial decision to donate and reactions to donation; (2) A series of case studies of blood collection activities with the goal of learning more about those management activities and personnel which motivate people to donate or not donate blood; and (3) Planning of experimental blood donor recruitment campaigns based on the above.

****The Socio-Political Impact of Sickle Cell Disease (HS 01447)**

Lawrence Gary, Ph.D.
Howard University
Institute for Urban Affairs and Research
P. O. Box 191
Washington, D.C. 20001

6/30/74 - 6/29/76

(\$37,550)

This study proposes to identify and examine the political and social factors which have contributed to the development of the sickle cell controversy in the black community. The target population for the investigation will include a sample of community residents, black professionals, leaders of sickle cell volunteer organizations, and key political and administrative figures in the federal government. Direct interviews will be the primary method of collecting data. Additionally, institutional sources of existing data will be utilized, e.g., congressional record, records of the National Institutes of Health, and vital statistics.

****Demonstration of Health Care Technology (HS 01449)**

William S. Yamamoto
George Washington University
Washington, D.C.

12/1/73 - 11/30/76

(\$79,865)

The purpose of this contract is to bring to completion the cardiac arrhythmia computer monitoring system currently under development at the George Washington University Medical School so that it may: (1) be clinically evaluated and (2) its specification turned over to industry. The goals of this project are directed toward the relief of the growing shortage of specialized nurses. This will be accomplished by relieving the CCU nurse of the responsibility of continuous rhythm surveillance, thus permitting her to spend more time in direct patient care. The automated arrhythmia monitor is designed to permit expansion to additional patients at diminishing cost increments.

****Hawaii Experimental Nursing Care Review Project (HS 01451)**

Charlotte A. Dennis, E. N.
Hawaii Nurses' Association
510 S. Beretania Street
Honolulu, Hawaii 96813

6/30/73 - 12/31/74

(No Funding FY 74)

The purpose of this project is to establish an experimental nursing care review program with the following objectives: (1) to develop models, based on problem identification and outcomes of patient care, for review of quality of nursing care in acute care hospitals; (2) to conduct pilot studies using the developed models to evaluate the feasibility and effectiveness of the review measures and audit processes; (3) to develop continuing education processes based on audit data to affect behavioral change of nurse practitioners.

These objectives will be achieved by a project staff working with expert nurse practitioners: (a) define critical criteria items for review of nursing practice over which the nurse has control and which will influence the outcome of patient care and (b) developing a process for retrospective review of data sources and current review of direct delivery of nursing care. In addition, the staff will cooperate closely with nursing audit committees, facility audit committees, in-service training staff, and various educational groups to assess differing methods of affecting behavioral change.

****Sells Experimental Medical Care Review Organization (HS 01452)**

E. S. Bebeau, M.D.
Indian Health Service
P. O. BOX 11340
Tucson, Arizona 85706

6/30/73 - 6/29/76

(\$65,204)

This project proposes to develop a quality assessment and assurance system in the Sells Indian Reservation. If successfully implemented, this quality assurance system could serve as a model to be used by the entire Indian Health System. The mechanism of quality assessment proposed by this IHRO is unique, since it depends upon: (1) selection of specific diagnoses; (2) development of disease stages which are homogeneous for health risk and health prognosis for each condition; (3) the use of a comprehensive information system; and (4) the involvement of a Tribal Council in setting priorities for the quality assessment activity. The quality assurance activity is also innovative since in order to be successful it is dependent upon: (1) cooperation of the Tribal Council; and (2) training and education of physician extenders to improve the quality of care. The effect that this quality assurance system will have on the health of the Indian population will be carefully evaluated.

This project fits well into the National Center's interest of improving methodology for assessing quality of care, as well as carefully exploring unique methods for assuring quality of care by changing the behavior of consumers, allied health personnel and physicians.

****Michigan Services Intergration System (HS 01453)**

John T. Despey
Executive Office of the Governor
Bureau of Management & Budget, The Capitol
Lansing, Michigan 48913

6/1/73 - 11/30/74

(No Funding FY 74)

The intention of this project is to intergrate the human services provided by eight separate agencies of the Michigan State government (Commerce, Corrective Education, Labor, Mental Health, Public Health, Social Services, and Employment Services), under the leadership and direction of the Governor of Michigan. It is expected that the eventual result of the project will be substantial reorganization of the Michigan State government; the more immediate short range result will be substantial integration of services provided by present separate Departments.

****Central Intake and a Systematized Approach to the Delivery of Human Services (CISRA) (HS 01454)**

J. Wendell Ramey
Non Valley Health and Welfare Council
Eastgate 8
Monessen, Pennsylvania 15062

7/1/73 - 6/30/75

(\$28,427)

The Non Valley Health and Welfare Council, an Experimental Health Services Delivery Organization as a result of its development of a Management Information System under contract (HSN 110-71-254) is now developing a client tracking and follow up system. This services integration system creates a uniform and common intake form that will be used by all the health and welfare agencies in the NON Valley area. This system also emphasizes criteria and information that will help in the decision process of which agency is most appropriate for each particular client. This approach follows a patient throughout the "system". With the addition of the CISRA the overall data system can respond to virtually any condition giving a variety of analytical responses.

****Financing Health Care Through Private Capital Markets (HS 01465)**

John Emery, Ph.D.
University of Arizona
College of Business and Public Administration
Tucson, Arizona 85721

5/1/74 - 4/30/75

(\$20,645)

The grant research will examine the history and trends of capital financing and the management of debt by hospitals. Conceptualization of the reasons hospitals decide to seek financing in the open market and why they choose a particular mode of financing will also be provided.

****Evaluation of Computer-Aided Care After Heart Surgery (HS 01467)**

Henry Edmunds, Jr., M.D.
University of Pennsylvania
Philadelphia, Pennsylvania

5/1/74 - 4/30/77

(\$127,266)

The purpose of this project is to evaluate the medical, economic, and educational benefits of computer-aided monitoring of two randomly selected groups of postoperative cardiac patients (computer-aided and non-computer-aided) that are subdivided into pediatric and adult age. A total of 400-500 patients will be evaluated annually at the two adjacent hospitals (Hospital of the University of Pennsylvania and Children's Hospital of Philadelphia). The study should quantitatively define the medical and manpower benefits of computer-aided monitoring of postoperative cardiac patients.

****Computer Aids to Therapy in Critical Care (NS 01472)**

Alfred Morgan, M.D.
Harvard Medical School
Boston, Massachusetts

6/1/74 - 5/31/77

(\$129,114)

The goal of this project is improvement and evaluation of intensive care, using existing facilities for care, computation, monitoring, and working jointly with members of the School of Engineering and Applied Mathematics, in order to develop methods of computer utilization in support of non-physician personnel in critical care medicine.

****System for Medical Decisions in Emergency and Critical Care (NS 01474)**

Max Weil, M.D.
University of Southern California
Los Angeles, California

6/1/74 - 5/31/77

(\$216,872)

The purpose of this project is to develop a computer assisted medical decision system to improve the effectiveness and quality of emergency and critical care. Three major tasks are: the medical research by which signs, symptoms and measurements which constitute the basis for diagnosis and selective treatment are identified and cataloged; the statistical analyses by which procedure for medical diagnosis are optimized, and the design of an operational computer and data management system, including an efficient data structure, by which interactive exchange of information with the clinical staff is facilitated.

****Salmon-Challis Medical Communication Project (HS 01481)**

Charles Castle, M.D.
University of Utah
Salt Lake City, Utah

4/1/74 - 3/31/76

(\$36,930)

This grant supports a two-way radio link between two remote towns located in the mountains of Idaho. A physician's assistant (MEDEX) is located 58 miles from his preceptor and serves a population of approximately 2,000 persons at distances of up to 200 miles. The objective of the project is to assess the impact of a MEDEX on health care in a rural isolated area and the problems encountered in trying to maintain a reliable and effective communication link.

****Multiphasic Checkup Evaluation Study (HS 01486)**

Gary Friedman
Kaiser Foundation Research Institute
Latham Square Building
508 - 16th Street, Room 622
Oakland, California 94612

5/01/74 - 4/30/77

(\$191,908)

This is a longitudinal experimental study, initiated in 1964, aimed at testing the efficacy of the multiphasic health checkup in the prevention or postponement of illness, disability and death. It is the only such study which has been attempted in the U.S. using an experimental design.

****Federal Program Implementation in Selected States (HS 01495)**

George Greenberg, Ph.D.
5638 Haven Hall
University of Michigan
Ann Arbor, Michigan 48104

6/1/74 - 5/31/76

(\$35,406)

The goal of this project is to study the implementation of two Federal grant programs (Title I of the Elementary and Secondary Act and the Partnership for Health Act) in three states. The major purpose of the study is to describe the relevant political and policy environments in each of the states chosen in order to understand how Federal programs are modified during implementation to fit state needs. The effect of Federal programs on the distribution of resources among localities with states, and the effects of state planning efforts on the implementation of policy are also major foci of the study.

****Quality of Care Study (HS 01499)**

Thomas H. Baker, M.D.
Kaiser Foundation Research Institute
4900 Sunset Blvd.
Los Angeles, California 90027

9/1/73 - 8/31/76

(\$119,426)

This project proposes to develop a quality assurance system in a large established HMO. The project design will incorporate measures of access, process of care, and outcome of care into an evaluation of quality of care. Information derived from this assessment will be made available on a regular basis to the physicians practicing in this HMO and other health professionals and the effect that this information has on subsequent physician behavior as well as the outcome of care will be subsequently measured.

This project is directly related to the national Center's interest in developing and evaluating a quality assurance system in a large FMO which relies on outcome measurement. It will also serve to extend knowledge about the comparison in terms of validity and reliability of techniques in assessing medical care quality.

****Health Subsystem: The Public Health Agency (HS 01500)**

Selma B. Deitch, M.D.
New Hampshire Social Welfare Council
Box 252, 52 Pleasant Street
Concord, New Hampshire 03301

6/30/72 - 12/31/74

(No Funding FY 74)

The long range goal of this project is to prepare for decentralization and regionalization of all state health services. The immediate objective is to build a subsystem by reorganizing and strengthening existing home health care services. Two visiting nurse associations in Concord and Portsmouth will be the initial focus for the development of a subsystem. The Bureau of Maternal and Child Health proposes to create this linkage of public agency to a private agency and to develop an organizational mechanism to bolster the private agency to meet the public needs not being met by the local government unit.

****Comprehensive Health Prison Health Project (HS 01501)**

Curtis Prout, M.D.
Massachusetts Health Research Institute, Inc.
600 Washington Street, Room 625
Boston, Massachusetts 02116

10/01/73 - 12/31/74

(No Funding FY 74)

The objective of this project is to bring about institutional change, specifically within the Massachusetts Department of Human Services and Divisions of Health and Corrections. The problems investigated during this year revolve around how to get two semi-autonomous divisions to work together to create a health system for the inmates; health related job training within and outside the walls and placement.

Previously funded by OEO, this has been a health service program rather than a research project, in spite of the name of the grantee. During for maintaining adequate health records in a system where larceny and pilferage of records is epidemic and very difficult to maintain. Related to this problem is the confidentiality of records as viewed by the inmates, by correctional officials and by correctional medical workers.

****Local Administrative Effects of Federal Health Grants (HS 01507)**

David Smith, Ph.D./
Swarthmore College
Swarthmore, Pennsylvania 19081

6/30/74 - 6/29/76

(850,623)

The purpose of this study is to investigate the administrative impact of Federal health grants in Philadelphia and Delaware Valley, Pennsylvania. The objectives are (1) to inventory the perceived and measurable effects of Federal health grants on the administrative procedures and program priorities of local recipients, public and private; and (2) to assess the significance of these findings for grants policy, comprehensive planning, and regulation of health providers.

The study will help explain why Federal objectives are either realized or miscarry at the local level.

****Rapid Telephone Access to Radiology Reports (HS 01508)**

Herbert Weintraub, M.D.
Framingham Union Hospital
Framingham, Massachusetts

6/30/74 - 6/29/75

(\$154,147)

This grant is supporting the development and evaluation of a system for rapid access of radiology reports. The system will allow the radiologist to use standard dictating procedures. The dictated report will be stored in a central analog voice memory retrieval facility controlled by a dedicated computer switching device. Each dictation is stored as a separate and distinct memory unit record, coded with the patient's name and other descriptors. The prototype system is designed for simultaneous storage of 32 dictations. Report access will require that the requesting physician dial the computer using the computer and patient access codes. This may be done either inside or outside the hospital. The response is anticipated to be within two seconds.

****Analysis of Hospital Charges and Length of Stay (RS 01516)**

Judith Lave, Ph.D.
Carnegie-Mellon University
School of Urban and Public Affairs
Pittsburgh, Pennsylvania 15213

5/1/74 - 4/30/76

(\$66,705)

This project consists of three separate analyses. In the first study, data from a large urban teaching hospital is utilized to estimate two separate single-equation models relating: (a) average daily charge to patient socio-economic and demographic characteristics, length of stay, teaching status of patient, discharge status, case-mix, and case-complexity; and (b) average length of stay to patient socio-economic and demographic characteristics, teaching status, discharge status, case-mix, case-complexity, day of admission, and average daily census of hospital during patient's stay.

In the second study, length of stay and average daily charge functions are estimated for patients with selected diagnoses in twelve western Pennsylvania hospitals.

The third part of this project is an evaluation of the effectiveness of Pre-discharge Utilization Review (PDUR), a procedure designed to monitor the length of stay of Medicaid patients in Pennsylvania. The length of stay model is estimated before and after PDUR and a statistical test is performed to determine if the coefficients of the model shifted over time. Length of stay functions for each hospital are compared to determine if variability between hospitals in LOS has been reduced by PDUR.

****A System Model For Health Care Delivery (RS 01529)**

Lester Lave, Ph.D.
Graduate School of Industrial Administration
Carnegie-Mellon University
Pittsburgh, Pennsylvania 15213

6/30/74 - 6/29/76

(\$94,001)

This research project consists of specification and estimation of a systems model of health care delivery. Estimation of the parameters of the model is accomplished using data from 12 surveys undertaken by WORC and OHO auspices to establish baseline medical utilization data for Neighborhood Health Center target populations. The model posits a hierarchical medical care system consisting of three tiers: primary care stations, clinics and hospitals. The demand for care is viewed as a function of objective need for care, perceived need for care, the out-of-pocket price of care, and the indirect cost of care to the patient. The parameters of the model consist of various probability matrices for each of the various branches in the system. The simulation model enables investigation of the effects on equilibrium (perceived) health status of the target population of various policy measures such as increased insurance coverage.

****Hospital Cost Functions, Shared Services and Mergers (HS 01532)**

David F. Baron, Ph.D.
Northwestern University
633 Clark Street
Evanston, Illinois 60201

6/1/74 - 5/31/77

(\$44,440)

This is a sophisticated, low budget project assigned to use Hospital Administrative Services Data (HAS) and other data, for the most part already collected, to examine the cost functions and the effects of hospital mergers and sharing of service costs.

The project is essentially three interrelated studies: (1) an estimation of hospital costs as a function of detailed hospital costs as a function of detailed hospital outputs; (2) an examination of the effect of hospital mergers on hospital costs; (3) an evaluation of shared services on costs.

****Broadcast Computer System for Patient History Taking (HS 01533)**

Charles Solnar
Washington University
St. Louis, Missouri

5/1/74 - 4/30/77

(\$172,457)

The objective of this project is to develop and evaluate a new method for supporting a large number of computer terminals that appear to their users to be interactive. The terminals can be used for administering patient history questionnaires, giving special instructions to patients, or executing other tasks of selective data collection or dissemination. The new technique involves "broadcasting" from a central transmitter to an unlimited number of "intelligent" terminals the digital information required: (1) to specify the question or information frames and (2) to present the frames in a logical sequence determined by the individual user's responses. The information is broadcast repetitively and continuously, so that the terminals can individually select information without directing specific requests to the central source. A prototype system is being designed to provide an alternative method for administering patient interviews developed using Dr. Warner Slack's HIS-based system that is now in operation at the Beth Israel Hospital in Boston. Using cable television communication techniques capable of transmitting 3 million bits per second per channel, it will administer initial patient history questionnaires in the Washington University Psychiatric Clinic.

****Model Services Delivery System for the Aging (HS 01534)**

J. Wendell Ramey
 Non Valley Health & Welfare Council, Incorporated
 Eastgate 8
 Ronessen, Pennsylvania 15062

6/30/74 - 6/29/76

(\$74,070)

This project is developing a demonstration model for the systematized delivery of comprehensive services for the aging. It is based upon the unique data capability of the Non Valley human services management board funded under contract with the Experimental Health Services Delivery Systems Branch (EHSDS), Bureau of Health Services Research. Such experience will serve to facilitate the development of an integrated data profile on the aging within the defined target area and an appropriate mechanism for "tracking," as well as providing for an in-depth analysis of services for the aging within a relatively contained delivery setting with studies of utilization patterns and areas of unmet needs. The information derived is leading to complete coordination of health and welfare services for the aging, including a Visiting Nurse Program, a Heals-on-Wheels Program, a Mental Health Clinic, a Day Care Center for the Aging, and services provided by the Veterans Administration, the Department of Health, and the Department of Health, and the Department of Welfare; all now housed in the Non Valley Community Health Center.

****Legal Issues in Health Care (HS 01539)**

Clark Ravighurst,
 Duke University
 Durham, North Carolina

6/30/74 - 6/29/77

(\$94,295)

Research and writing on legal issues such as relate to (1) the development of health maintenance organizations, and particularly their ability to induce, through competition, greater cost-consciousness in the health care system as a whole; (2) regulation of the health care system, including monitoring of legislative developments and actual regulatory performance; and (3) quality assurance by regulatory and non-regulatory means, as well as consideration of a "no-fault" medical-injury insurance scheme. In regard to the concern with the regulatory area, consideration will be given to the application of antitrust principles in the health field. The activity here will involve (1) analysis of case law; (2) observation of the consistency of the cases cited with other trends in the antitrust field; (3) assessments of judicial views of the competitive situation and of barriers to adequate performance by the system as a whole; (4) review of the non-legal literature of the health system and its behavior as interpreted in the light of the antitrust principles; (5) empirical investigation, such as on-site study of agency records, interviews, etc.

****Pilot Project - MUMPS Users' Group (HS 01540)**

Joan Siewerman, M.D.
Washington University
St. Louis, Missouri

6/1/76 - 5/31/77

(\$58,997)

This project provides a mechanism for the channeling, deployment, and wide scale implementation of the many new medical application programs being written in MUMPS. MUMPS is a relatively new and rapidly growing computer language and executive system developed specifically for time-sharing interactive programming and for storage and capture of medical data. During the past several years upwards to ten DHCIST grantees and contractors have utilized MUMPS technology as the system of their choice to achieve various R & D objectives. Upon successful demonstration of these application programs there has been a traditional let-down in their exportation, either for replication of results or adaptation to other medical problems resolvable by comparable software development. The project will channel this collected body of system documentation (current numbering over 150 individual software packages) and facilitate the quick dissemination of research efforts to health providers. Extensive documentation is available upon request, including a MUMPS Newsletter published quarterly.

****Computer-Based Consultations in Clinical Therapeutics (HS 01544)**

Stanley Cohen, M.D.
Stanford University
Stanford, California

6/1/76 - 5/31/77

(\$161,682)

The objective of this project is the development of a computer-based mental knowledge of experts to improve the effectiveness of medical decision-making with regard to clinical therapeutics.

****Dental Practice Profiles: A Quality Assessment Model (HS 01545)**

Howard Bailit, M.D.
University of Connecticut
School of Dental Medicine
Farmington, Connecticut 06032

5/01/74 - 4/30/76

(\$63,434)

The purpose of this project is the development of dental practice profiles based on quantitative indices of the process and outcome of care. Process is to be quantified in the form of utilization of specific services while outcomes will be described in terms of morbidity. Profiles will be developed on 20 private dental practices based on information acquired from claims forms and patient records. This will be followed by a direct assessment by trained assessors of the quality of care provided to a sample of patients from each practice. The validity of the profiles will be determined by comparing them to these direct assessments of care. In a sense, the profile can be considered as a screening device for large populations in conjunction with a review system utilizing direct examination of patients for cases involving a more detailed assessment. Variations in the quality of care according to different practices, organizations, insurance plans, or other structural factors could be determined by such a profile system.

****Health Law Project (HS 01547)**

Edward Sparer, LLB
University of Pennsylvania
Philadelphia, Pennsylvania 19104

11/1/73 - 10/31/74

(\$267,333)

The conduct of legal research and writing, in five main areas of activity: (1) Legal problems surrounding quality of care and its enforcement in the public (municipal or county) hospitals; (2) Legal issues inherent in consumer accountability problems in newly developing health delivery and payment mechanisms; (3) Federal Indian health care; (4) work on quality of care and cost control mechanisms; and (5) problems in legal enforcement of the outreach and preventive health care requirements in Title XIX of the Social Security Act.

These activities are a continuation of work being done when this project was transferred to this Bureau, and the current project period terminates on October 31, 1974. After the current activities are completed, and reports are prepared, it is proposed that the project will consist of a Visiting Scholar Program and a Health Law Project Library. This new proposal is currently pending review.

****Treatments and Costs of Drug Related Morbidities (HS 01541)**

William Campbell
Kaiser Foundation Research Institute
Latham Square Building
508 116th Street, Room 622
Oakland, California 94612

6/1/74 - 10/31/75

(\$115,995)

This project proposes to identify and analyze data on the frequency and cost of drug system induced morbidities as a part of its evaluation of the total drug system within an HMO setting. Drug related episodes within an between populations will be evaluated with the goal of assigning departmental responsibility for prevention of each episode. This knowledge will facilitate the development of preventive measures in the form of Drug Use and Control procedures.

****Medical History Question: A Health Screening Test (HS 01563)**

Phillip I. Herzhberg
Boston University
Boston, Mass. 02115

6/30/72 - 6/29/75

(\$65,242)

This research study will consider the value of the medical history question in clinical and pre-clinical screening for disease states. This study should have relevance for screening for well individuals as well as histories obtained in institutional settings.

Validity, reliability, yield availability of follow-up services, importance of the disease and success of treatment will be used as parameters for measuring the effectiveness of the medical history question.

****The Informative Process in Medical Care (HS 01565)**

W. Richard Scott, Ph.D.
Stanford University Medical Center
Stanford, California

11/1/73 - 6/29/75

(\$32,210)

This research will focus on physician to patient communication patterns. The investigator will determine what criteria physicians use in deciding the type and the extent of the information they share with patients.

The answer to this question is very important in improving the care which patients should give themselves and the way in which they follow physicians' recommendations. It will also provide concrete data for educators which can be used in teaching students how to communicate effectively with patients. This grant will have another dividend which will be the testing of the methodology for studying physician-patient communication patterns.

There will be a total stratified sample of 375 patients who will then be stratified into three sub-samples.

The doctor-patient interviews in the first sub-sample will be tape recorded and analyzed according to area of medical content covered and the time spent on each, the type of information given by the patient, and the level of explanation given by the physician. Questionnaires and interviews will also be administered to physicians and patients.

****Care Evaluation in University and Community Hospitals (HS 01567)**

Dorothy Douglas, Ph.D.
University of Iowa College of Medicine
8150 General Hospital
Iowa City, Iowa 52242

10/1/73 - 3/31/75

(\$38,249)

The purpose of this project is to develop and demonstrate organizational alternatives and systematic methods in the review of medical care.

This project is developing a coordinated set of medical care quality assurance mechanisms based on comprehensive abstracts of medical care, using the redco rds from each type of facility to form a linked assessment of the quality of care provided. The results of ongoing assessment of quality will be used to direct a program of medical staff-based problem-specific educational programs, in which participating physicians will help identify specific deficiencies and will receive educational progress and instruction specific to their needs.

In performance of this project, the principal investigator and his staff are generating new knowledge about the feasibility and practicality of large-scale in-depth record abstracting, as well as an understanding of the value of the resulting data for purposes of quality assessment, educational deficiency specification, and more general health services research questions.

****Health Care Evaluation Project (HS 01568)**

David Miles, MBA
Lawrence County Hospital Association
109 Hospital Street
Moulton, Alabama 35650

6/30/74 - 6/29/77

(\$91,854)

The primary objective of this project is the evaluation of the effectiveness of health teams in Lawrence County, Alabama. Composed of a physician, a physician assistant, a public health nurse, a social worker, and two multi-purpose aides, the team is designed to make health services available to an essentially low-income, rural population that has had practically no access to such services. A secondary objective is to compare and validate several instruments for measuring health status. It is hypothesized that the health status of the population in Lawrence County will be better than that of the population in a comparable county where no health teams operate.

This project is in accord with the Bureau objective of testing innovative health service modalities to improve the access and quality of services to under-served populations.

****Clinical Computer Resource Related Research Project (HS 01569)**

Shannon Brunjes, M.D.
Yale University School of Medicine
New Haven, Connecticut
1/1/74 - 12/31/75

(\$128,281)

The focus of this project is medical information. It is planned to combine clinical and research information into a single coded structural data base and to develop suitable computer programs and interfaces to facilitate the input and reporting of this information for both patient care and research use. The secondary objective is to make such a computerized information system cost-effective for routine patient care use, thus making large amounts of machine processable information available for clinical investigators. Such a generalized system will obviate the need for expensive chart review or special data summarizing forms and protocols for much clinical investigation.

****Automated Physician's Assistant (HS 01571)**

Fred Lucas, M.D.
University of Missouri
Columbia, Missouri 65201

6/30/74 - 6/29/75

(\$278,529)

The purpose of this project is for the continuation of Phase III of the Automated Physician's Assistant Project (APA). During Phase III, the project attained several major objectives: the development of a methodology for implementing the design of an ambulatory care system; the development of a technique for both pre- and post evaluation of the effect of introducing a change in a component of a health care delivery system and the development of an integrated software system of medical services using the HUMPS system and incorporating the results of other developmental efforts. The goal of this continuation effort is to implement and evaluate the design methodology for ambulatory care in several settings typical of rural practice.

****Quality of Care and an HMO Automated Medical Record (HS 01577)**

Shannon Branjes, M.D.
Yale University School of Medicine
333 Cedar Street
New Haven, Connecticut 06570

6/30/74 - 6/29/77

(\$229,912)

This project is an investigation of quality of care assessment techniques based on an automated medical record system in a prepaid group practice setting. A unique feature of this computerized record system is that it provides a coding scheme for clinical data making virtually all of the medical content of the record machine processable. This provides a uniquely suitable data base on which to formulate and test process criteria and to correlate their use with outcome of care.

Specific aims of the project include monitoring and comparison of physician behavior, testing the feasibility of the code data in development of health status indicators, investigating the utility of the record system in preparing protocols for comparing process and outcome, and determining the suitability of the record system for incorporation of quality assurance mechanisms.

This project relates to BHSR's interest in developing tools for measurement of the quality of health care.

****Hospital Regulatory Reporting System: A Demonstration (HS 01501)**

Gordon R. Cumming
Hospital Educational Foundation of California
925 "L" Street, Suite 1250
Sacramento, California 95814

6/30/74 - 6/29/75

(\$94,127)

This is a three part activity involving determination of hospital data requirements under a state program, development of a questionnaire incorporating these requirements and avoiding duplication, and development of a method to generate required reports from data obtained through the questionnaire. The questionnaire will be field tested on approximately 10 hospitals and sample reports generated and evaluated for utility in meeting reporting requirements.

****Economic Analysis Washington State Nursing Home Data (HS 01502)**

Kenneth McCaffree, Ph.D.
Battelle Memorial Institute
Human Affairs Research Centers
4000 N.E. 41st Street
Seattle, Washington 98105

6/30/74 - 6/29/75

(\$78,506)

The general objectives of this research are (1) to analyze the consequences of government regulations and public policy on the nursing home industry; (2) to develop an economic model of the nursing home industry to examine the effects of alternative public policies; and (3) to determine the impact of qualitative characteristics, such as size and location, on the cost and quantity of output in the nursing home industry. Also examined are possible differences in cost and output between proprietary and non-profit homes, possible discrepancies between public and private patients in the array of services received, the relationship between cost and level of output (returns to scale), and the ease with which inputs can be substituted for one another in the production of care.

Production functions will be estimated using comprehensive data which describe capital and labor inputs, patient days by class of service, cost information and accounting procedures for 278 nursing homes in the State of Washington.

****Method of Evaluating and Improving Ambulatory Medical Quality (HS 01583)**

Beverly Payne, M.D. *
University of Michigan
4661 Kresge I
Ann Arbor, Michigan 48104

6/30/74 - 6/29/78

(\$190,571)

The overall objective is to develop a methodology for evaluating the quality of ambulatory care in several settings in metropolitan Detroit and Ann Arbor, comparing process with outcome measures, and attempting to determine the relative effectiveness of two different methods of data feedback on improving the quality of ambulatory medical care.

The study involves (1) the development of process and outcome criteria of quality of care for 10 indicatory conditions, by the physicians whose practices will be under study; (2) a retrospective analysis of patient records in those practices in comparison with the criteria, to establish a "physician's performance index" (PPI); (3) an analysis of these PPI's in terms of various characteristics of the participating settings and physicians; (4) the introduction of one of two methods of data feedback (one being simply the reporting of the results of the analysis, similar to PSBC requirements; the second, a planned intervention aimed at more change in physician behavior, through seminars and frequent follow-up contacts); and (5) through re-sampling of patient records for additional measures of process, a determination of the relative effectiveness of the two interventions in achieving improved quality of care.

****Northwestern University Medical School Clinics (HS 01585)**

Susan E. Orden
Northwestern University
633 Clark Street
Evanston, Illinois 60201

6/30/74 - 6/29/76

(\$36,049)

The broad long-range objective of the research is to conduct a longitudinal study of health care delivery in the Northwestern University Medical School clinics spanning a transition period in which the clinics will be re-organized and incorporated into a group practice. The immediate objective is to describe the current operations before the re-organization takes place to provide base-line data for future comparisons. The key dimensions are (1) composition of the clinic patient population in terms of health status, utilization patterns, socioeconomic and demographic characteristics; (2) attitudes of patients regarding the accessibility, continuity, quality, and satisfaction re their care; (3) attitudes of physicians, residents, and medical students on same concepts; (4) opinions of physicians, residents, and medical students on balance among teaching, research, and service; and (5) ways to assess quality of care provided in clinics.

****Emergency Care Quality: Usefulness of Patient Profiles (HS 01589)**

Carlos Vallbona, M.D.
Baylor College of Medicine
1200 Moursund Avenue
Houston, Texas 77025

6/30/74 - 6/29/77

(\$173,564)

The purpose of the project is to evaluate the effectiveness of making available a profile of the past medical history of each patient who presents himself for diagnosis and treatment for real or supposed emergency situations in an Emergency Room of a metropolitan hospital. The Health Illness is constructed from a data base derived from the clinical records of those patients who have been treated in two neighborhood health centers and in the Emergency Room of the Ben Taub General Hospital in Houston. The HIP includes patient identification, demographic information past medical problems, past diagnostic tests, and a summary of treatments and referrals. The usefulness of the profiles will be tested by attaching them to the charts of one-half of the patients and withholding them from the examining physician for the other half. The dimensions to be examined include the appropriateness of care received, the changes in continuity of care, reduction in duplication of diagnostic tests, and better utilization of drugs.

****Evaluating an Outcome Based Quality Assurance System (HS 01590)**

John Williamson, M.D.
Johns Hopkins University
Charles E 34th Street
Baltimore, Maryland 21205

6/30/74 - 6/29/77

(\$217,755)

The objectives of this project are to: (1) consolidate, analyze and refine the "health accounting" technique of outcome assessment, (2) to evaluate procedural reliability and validity, and (3) to examine the impact of the health accounting strategy on improving quality of care.

Outcome standards setting and the ability of the health accountant to determine the patients' function impairment level will be evaluated for reliability and validity. The impact of the health accounting on quality will be studied by examining the results of the studies done in the participating clinics for documented improvement of diagnostic or therapeutic outcomes. Knowledge, understanding, application, and acceptance of health accounting by the clinic staff members will be measured.

****Innovative Technology in a Rural Health Care System (HS 01591)**

William Fifer, M.D.
Interstudy
Minneapolis, Minnesota

6/30/74 - 12/31/75

(\$217,612)

The purpose of this grant is to study the effect of the application of innovative health services technology on the productivity of a semi-rural fee-for-service group practice providing comprehensive health services. The activity is divided into three phases: (1) to study the flows of ambulatory patients through the Lakeview Clinic health care system in order to determine at what points the application of communications or other health care technology would be effective; (2) to apply the appropriate technology at those points determined by phase one and evaluate its impact on productivity; and (3) to determine by extending our observations outside the system under study the communications and/or other health care technologies needed to support the linkages of a decentralized but aggregated hierarchical health care system. The methodology of phase one will be to study patient trajectories through the system in order to determine where blocks to flow occur, the consequences of those blocks including their effects on medical outcome, and whether the application of technology would relieve the blocks and increase productivity.

****Quality Assessment Methods in Primary Care (HS 01596)**

Robert Kane, M.D.
University of Utah College of Medicine
50 North Medical Drive
Salt Lake City, Utah 84112

6/30/74 - 9/29/75

(\$145,482)

This study will examine the relationship between various outcome and process measures of the quality of ambulatory care. The study is exploratory on basic research in that the intent is to determine the nature and degree of relationships that might exist, rather than to test or confirm some hypothesized relation.

The study consists of a prospective portion focussing on outcomes and a retrospective portion focussing on process measures and costs. Outcome measures will include expected vs achieved functional status, as determined by both provider and patient, and also clinical finds. Process measures will be based on criteria previously developed by the Utah INCHO. Settings used will be the ambulatory clinic of the University of Utah College of Medicine.

****A Study of Preventable Hospital Admissions (HS 01611)**

Paul Gertman, M.D.
Boston University School of Medicine
E108
75 East Newton Street
Boston, Massachusetts 02118

6/30/74 - 6/29/76

(\$115,778)

The objective of this project is to eliminate the occurrence of hospitalizations for patients whose clinical reasons for admission are either completely preventable or modifiable by appropriate ambulatory medical care. The specific goal of the proposed research is to develop a valid, cost effective method for detecting cases of preventable admissions, which could be instituted in the near future and which could lead to corrective action by the medical community.

Five admission diagnosis categories with a high probability of containing preventable admission (i.e., diabetes mellitus) will be examined by two explicit criteria quality assessment methods, utilizing different levels of information. A total of 500 new admissions in the diagnosis categories will be reviewed first with a simulated "claims abstract" of a years prior medical care. These same cases will be reviewed using a detailed clinical case abstract. Each case will be reviewed independently by three physicians. An analysis of the prevalence of preventable admissions and the comparative reliability and sensitivity of the two review methods will be conducted.

****Laboratory for Development of Health Information System (HS 01613)**

Frank C. Starmer, Ph.D.
Duke University
Durham, North Carolina

6/1/74 - 5/31/77

(\$393,134)

The objective of this project is to establish a Laboratory for development of Health Information Systems which will develop an information system that will supply the practicing physician with information of a kind and quality which is not available to him at the present time. The practicing physician will define the descriptors which describe his current patient and search of the data bank will supply him with information on the patients who have these same descriptors and their outcome. The data bank will be built by the staff of the Duke Medical Center, but can be used by any health professional.

****Studying the Impact of Patient Drug Profiles in an HMO (HS 01621)**

Richard Johnson, Ph.D.
Kaiser Foundation Research Institute
1956 Webster Street, Room 3108
Oakland, California 94612

6/30/74 - 6/29/75

(\$60,128)

The purpose of this project is to assess the effects of providing physicians and pharmacists with patient drug-use information on the physician's prescribing behavior and his drug-use recording system in an HMO, the Kaiser Portland Health Plan. Concurrently, the drug-use behaviors of patients will also be studied as a function of their knowledge of previous drug-use patterns.

A subsample of physicians and pharmacists in the Kaiser Portland Health Plan are to receive systematic feedback on their prescribing and filling patterns and their behaviors are to be observed and compared with those of other physicians given no feedback. Another subsample of patients will be given detailed records of their drug usage and any changes in their drug-use behavior noted. Those physicians and patients whose behaviors changed are further studied to isolate common characteristics.

This project relates to the Bureau's goal of improving health services through better and more effective use of drugs.

****Perceptions of Health in a Mexican-American Community (HS 01622)**

Glee Hubbard
Foothill Community College District
12345 El Monte Avenue
Los Altos Hills, California 94022

6/26/74 - 6/25/75

(\$2,425)

This project seeks to study the perceptions of health in a Mexican American community utilizing participant-observer methodology. In-depth interviews will be conducted with volunteer informants to generate hypotheses about the values and beliefs influencing the residents' perceptions. A questionnaire will then be developed and administered to an independent stratified sample of the residents. Specific objectives of the study are the community's perception of: (1) its own health, health problems, and health services specifically in addictive substances, mental retardation, general and emergency care; (2) accessibility, acceptability, and availability of existing health services provided by public health programs and agencies; and (3) improvement, expansion and/or alternatives of existing services to better serve needs.

****Family Investment in Child Health (HS 01623)**

Bernard Friedman, Ph.D.
Department of Economics
Brown University
Providence, Rhode Island 02912

6/30/74 - 12/31/75

(867,153)

This research explores the determinants and consequences of investment in child health, the central premise being that parents forego some current consumption of resources in order to enhance the future opportunities of their children. Recent theoretical innovations in the analysis of human investment and the non-market productive activities of households are used to specify a new model of the family investment process. Formally treated is the problem of maximizing the lifetime stream of parental utility, recognizing that parents save out of current resources to provide a vector of bequest assets to their children. Two of these assets are health and academic training. Standard econometric methods of estimation are applied to survey data from the National Center for Health Statistics' Health Interview Survey to test theoretical insights about the determinants of health investment, the demand for certain health services, and the possible shifting of the distribution of health with age. The investigators also use Terman's well-known longitudinal survey data to test the impact of the distribution of child health on the distribution of later economic opportunity.

****Use of Research Findings in Policy Decisions (HS 01628)**

Lee Sachrest, Ph.D.
Florida State University
Department of Psychology
Tallahassee, Florida 32306

6/30/74 - 6/29/75

(850,180)

The aim of the proposed research is primarily to develop adequate methodology for studying the factors determining the influence that scientific information will have on decision makers in the health services field. It is believed that if more knowledge of those factors were available more persuasive research with more probable impact could be planned with little if any threat to the scientific quality of the research. Three types of interview methods will be developed and tried with decision makers at three levels in the health services hierarchy. The interviews are designed to determine which factors in an experiment or other investigation are most and least important in influencing a decision maker to seek to implement, directly or indirectly, the conclusions of the research. One of the interview methods involves an experimental paradigm in which existing research is presented in varying ways; the other two methods involve either an interview structured around specific research problems or an interview directed only to more general concerns. Materials suitable for continuing investigations, along with recommendations for further research, will be products of the proposed project.

****Multivariate Analysis of Health Behavior (NS 01630)**

Frank Levy, Ph.D.
Department of Economics
University of California
Berkeley, California 94720

6/30/74 - 9/29/75

(\$21,130)

The grant research will explore the multivariate relationships between health status, health behavior, environmental and individual background characteristics. Analytical assessment of the relative effects which usage of medical care and non-medical behavioral practices may have on health status should be a significant contribution of this exploratory grant.

****Evaluation of Outcome of Nursing Home Care (NS 01638)**

Kenneth McCaffree, Ph.D.
Human Affairs Research Centers
Battelle Memorial Institute
6000 N.E. 41st Street
Seattle, Washington 98105

6/15/74 - 12/15/75

(\$292,397)

The primary objective of this project is to do the planning and development necessary to perform research on the variables related to the outcome of nursing home care. Using a random sample of residents/patients in six pretest facilities, data on resident/patient mental and physical status and satisfaction with services will be collected twice: staffing patterns, costs, employee and administrator attitudes, environmental and structural variables and ownership-control status, among other variables, will be considered for relationship to outcome measures of nursing home care.

The reliability and validity of the data collection instruments will be assessed. The acceptability of the research protocol and design to nursing home administrators will also be determined.

****Utilizing Peer Review Data to Meet Multi-User Needs (HS 01640)**

John Sussman, M.D.
 Saltmonah Foundation for Medical Care
 5319 S.W. Westgate Drive, Suite 24
 Portland, Oregon 97221

6/1/74 -5/31/76

(\$200,000)

The objective of the project is to research, design, develop, test and operate a multi-use data system which will minimize the time required to document the care rendered, while allowing for various use of these data. The data needs of the quality assessment organization, the health planners, the medical statisticians, and most importantly, the data needs of the physician and patient will be identified and coordinated. A central data processing system, operated by the foundation, will collect, process, and store the patient care data reported by the physicians and will provide data output service to each of the users.

****An Evaluation of a Computerized ECG Analysis System (HS 01646)**

Paul H. Gortman, Ph.D.
 Northwestern University
 Evanston, Illinois

6/30/74 - 6/29/76

(\$38,566)

This is a two-year exploratory grant to develop more sophisticated investigation techniques in evaluating ECG systems. The technological state-of-the-art in automated ECG systems has undergone radical change in recent years. Most of the evaluation studies reported in the literature were dependent on hardware and software specifications undergoing rather constant developmental change. The system to be used in the proposed study represents "off the shelf" technology which should add considerably to the transferability of the findings. In addition, the methodology includes an experiment not previously studied, a determination of the extent to which physicians may become dependent on automated ECG systems after their use becomes routinized. The project was awarded \$25,000 Direct costs, plus \$13,563 Indirect costs, (totaling \$38,566) in FY 74 funds, for the 01 year beginning June 30, 1974. An identical funding level was recommended for the 02 year. Study results will not be available until midway into the 02 year.

****Development of Criterion Measures of Nursing Care (HS 01649)**

Barbara Horn, Ph.D.
University of Michigan
School of Public Health II
109 Observatory, Room #2226
Ann Arbor, Michigan 48106

6/30/74 12/31/75

(\$21,954)

This project is a three year extension of work already underway at the Bureau of Hospital Administration at the University of Michigan School of Hygiene to develop an instrument to assess the outcomes of the in-hospital nursing care process as reflected by the patients' physical and emotional status, and the extent of their knowledge about how to monitor their condition and what measures to utilize for maintaining or improving their condition. The specific aims of work are to continue to develop and refine an instrument which will measure outcomes of nursing care related to common nursing care problems. Within the next three years the following will be done: (1) generate new outcome measures particularly in the psychosocial area; (2) redraft items and the instrument, and gain consensus validation; (3) field test the new version of the instrument and show sensitivity, reliability, and relation to nursing practice; and (5) revise the various manuals.

****Analysis of Utilization of a Comprehensive HMO (HS 01653)**

Jay H. Glasser, Ph.D.
School of Public Health
University of Texas
P.O. Box 20186, Astrodome Station
Houston, Texas 77025

6/30/74 - 6/29/76

(\$103,004)

The focus of this research is a structured study examining the broad spectrum of factors bearing on utilization set within a multi-disciplinary context. This project will carry out descriptive and analytic studies on the utilization experience of a defined population - a prepaid comprehensive health service delivery system, Kaiser (Portland Oregon) - in terms of: prevalence and incidence studies on the cohort experience of the study population with respect to morbidity and service; stochastic distribution of services and morbidities; etiology of disease; provider behavior; and alternative methods of the classification of disease. Employed by the study will be the 1967 - 1970 utilization data base of the Kaiser (Portland) membership study. The ambulatory care inpatients, and the membership (person-months) Calendar File are used to link together the total utilization spectrum of an on-going, longitudinal 5% sample. These data are supplemented by a household interview survey.

****Models for Health Care Decentralization (HS 01650)**

Thomas Willemsin, Ph.D.
Massachusetts Institute of Technology
Cambridge, Massachusetts

6/30/74 - 8/31/75

(834,988)

The objectives of this research are (1) to investigate the potential impact of mathematical methods on the operation of health regulatory agencies with particular emphasis on certificate of need procedures; (2) to develop simple analytical models of decentralization; (3) to explore the development of alternatives to classical optimization methods; and (4) to explore the concept of patient trajectory as a process measure relevant to decentralization issues.

****Task Activities Analysis of EMS (HS 01665)**

Arthur Jacobs, M.D.
Department of Community Medicine
Dartmouth Medical School
Hanover, New Hampshire 03755

8/30/74 - 12/31/75

(8138,342)

This study is to develop a task analysis methodology to describe and compare task repertoires of ambulance personnel. Additional research objectives include the testing of hypotheses related to task performance. Among the independent variables to be analyzed are frequency of utilization, level of equipment, and level of attendant training. A Patient Contact Record will be developed and validated to gather task performance data. Application of the protocol will be undertaken to relate task performance to various course curricula and to patient outcomes.

****Community Health Education Project (HS 01670)**

Susanne E. Lee
American Public Health Association
1015 18th Street, N.W.
Washington, D.C. 20036

6/1/74 - 5/31/75

(\$150,000)

The objective of this project is to develop strategies and activities which will increase the quantity and effectiveness of health education programs in local communities. The activities will consist of developing a resource document designed to supplement the guidelines and models by providing specific information on health education resources available to local communities, and providing technical assistance to local health centers to enable them to plan and implement effective health education programs. The evaluation of the activities of the technical assistance, field testing of the models and analysis of the strengths and weaknesses of the project structure will also be included.

****Primary Health Care Study Program (HS 01680)**

Alberts Parker, M.D.
University of California, Berkeley
University Extension
2223 Fulton Street
Berkeley, California 94720

6/30/74 - 6/29/75

(\$303,437)

The objective of this study is the exploration of the relationship between organization and performance in primary health care. What organization variables are related to a high level of performance? Performance is limited to qualities "uniquely important" to the delivery of primary care. Operational criteria for performance are developed normatively, using the Nominal Group Process (Delbecq) with consumers from a wide range of ethnic-income groups and with primary care "experts". Organizational variables are structural and contextual, identified by students of organizational behavior for their relevance to performance in primary care systems.

****Outreach and Transportation Study (HS 01687)**

Thomas H. Baker, M.D.
 Kaiser Foundation Research Institute
 1956 Webster Street, Room 310-B
 Oakland, California 94612

6/1/74 - 8/31/75

(\$176,345)

To determine whether there is a relationship between the provisions of outreach and/or transportation services and the quantity and patterns of health care used by a group of Title XII beneficiaries (Aid to Families with Dependent Children) who are members of a prepaid group health care plan.

Eighteen hundred new AFDC families will be enrolled at four facilities. All new members will receive comprehensive health care coverage. Different mixes of supplementary services will be provided these families at three of the four facilities. The fourth facility will offer no supplementary services. Utilization and patterns or types of utilization will be studied at each of the four facilities to ascertain the effect of providing outreach and transportation services. The quantity and patterns of health care utilized by AFDC and other Kaiser Foundation Health Plan members will be compared.

****Publication of the Hospital Ward Book (HS 01698)**

John D. Thompson
 Yale University
 155 Whitney Avenue
 New Haven, Connecticut 06520

6/30/74 - 6/29/75

(\$10,000)

This is a grant to provide a subsidy for publication of the "Hospital Ward Book", the end product of the principal investigator's research in to historical materials in regard to the development ward.

****Health Care Among Tennessee Medicaid Recipients (HS 01703)**

Charles F. Federspiel, Ph.D.
Vanderbilt University
Nashville, Tennessee

12/1/74 - 11/30/76

(\$33,654)

This is a proposal to explore the possibility of using for research purposes the data now routinely collected for administration of the Tennessee Medicaid Program. The current data system which was designed for operational and administrative use has been under development for approximately 4 years and provides routinely required expenditure and surveillance reports. These data have never been exploited for health services research purposes. The objective of the activity proposed here is to restructure files for increased flexibility and efficiency of retrieval. The long term goal is to produce data for omnibus health services investigation. Three specific subprojects are proposed as specimen activities utilizing the reformed data.

****Social and Health Indicators Methodology Development Project
(Interagency Agreement)**

John Deshaies
Bureau of Census, SESA
Department of Commerce
Washington, D. C.

7/1/71 - 6/30/75

(\$819,600)

This agreement is being submitted as a result of a recent discussion between the Department of Health, Education, and Welfare, Health Resources Administration Bureau of Health Services Research and Evaluation staff and staff of the Census Use Study, Bureau of the Census. This agreement is for completion of three tasks on the Social/Health Indicators Program which was funded by the Health Resources Administration in fiscal year 1974 and by the Office of Economic Opportunity in fiscal years 1972 and 1973. In addition to this present agreement, the Social/Health Indicators Program is being funded in fiscal year 1975 by the Department of Health, Education, and Welfare--Division of Comprehensive Health Planning.

****To Provide Scientific and Technical Assistance in the HUNPS and PROMIS Projects (Interagency Agreement)**

Ruth N. Davis, Ph.D.
National Bureau of Standards
Gaithersburg, Maryland

11/1/72 - 6/30/75

(\$451,500)

The National Bureau of Standards (NBS) will: Continue its coordination and participation role in the determination and description of a standard Massachusetts General Hospital Utility Multi-Programming System (HUNPS) programming language that will be based on the interim standard achieved at the June 1974 HUNPS Development Committee (HDC) meeting. NBS is one of the organizations assigned to HDC task forces charged with accomplishing this goal; other organizations are the dialect sponsors.

****The Pharmacist As A Provider of Primary Medical Care (Interagency Agreement)**

Jerome Short
Phoenix Indian Medical Center
Phoenix, Arizona

4/1/73 - 3/31/75

(\$46,000)

The project is designed to develop, implement, demonstrate and evaluate a prototype practice model in which the pharmacist provides primary medical care to patients presenting themselves to an outpatient department for medical treatment, following pre-determined specified protocols, and under the supervision of the medical staff.

The project is expected to answer questions regarding the effectiveness and cost effectiveness of expanded roles which may be performed by the pharmacist in the area of direct patient care. Both quality of care and costs are involved in this project.

****Clinical Evaluation of the Health Care Technical Division ECG Analysis Program. Version E (Interagency Agreement)**

Richard Heish, Ph.D.
USPHS Hospital
Federal Health Program Service
Health Services Administration
Baltimore, Maryland 21211

8/13/73 - 8/13/74

(\$100,000)

The National Center for Health Services Research has developed a computer program (ECAN) to analyse electrocardiograms (ECG). Under terms of an FY 74 agreement between NCHSR and BHS the Health Services Research facility at the Baltimore PHS Hospital developed and implemented a methodology for evaluating these computer programs. Results of the evaluation will be delivered to the NCHSR by July 1, 1975.

****Comprehensive Health Services, Program Review and Evaluation Methodology (OEO 20026)**

Mildred A. Morehead, M.D.
Albert Einstein College of Medicine
1300 Morris Park Avenue, Room 1303
Bronx, New York 10461

1/1/74 - 12/31/74

(No Funding FY 74)

Data from on-site assessments as well as established protocols for care have been collected and are available for comparative analyses. In addition, indications from this on-site assessment experience are that there is need to develop specific disease treatment criteria, as well as evaluation criteria for additional components of a delivery system. Using data collected over the past six years of site assessments of Neighborhood Health Centers comparisons and analyses of characteristics will be completed. Panels of appropriate specialists will develop, test, and issue protocols for specific disease criteria and evaluation criteria, as well as critique existing protocols collected from the field.

****Prognostic Epidemiology: Heart Disease, Cancer and Stroke (PH 43-66-948)**

John Williamson, M. D.
Johns Hopkins University
School of Hygiene and Public Health
Baltimore, Maryland 21205

4/2/68 - 12/31/74

(\$905,830)

This project is the logical outcome of the previous work done in the original contract, "Prognostic Epidemiology: Heart Disease, Cancer and Stroke." As a part of an effort to improve care, both in its efficacy and efficiency, the concept has been developed for the health 'accountant' who will assist practitioners in order to improve quality of care. The health accountant has been tried on a limited basis in a few sites to test for feasibility and acceptability.

****Training for Research in Medical Care Organization (TO1 HS 00002)**

Eugene Feingold
University of Michigan
School of Public Health
Ann Arbor, Michigan 48104

11/1/64 - 7/31/79

(\$213,042)

The training program, leading to the Ph. D. degree in medical care organization, is intended to prepare students for careers in research, teaching, and policy formulation. Over a three-year period a student is required to concentrate in one of three relevant fields of study in medical care: sociology; economics; or political science.

This program gives its trainees an understanding of the health services delivery system problems of access and quality, and prepares them for dealing with these problems in teaching, policy formulation, and research. A substantial number of investigators trained under this program are actively engaged in health services research.

****Research Training in Medical Care (TO1 HS 00003)**

Jacob J. Feldman, Ph.D.
Harvard University School of
Public Health
Boston, Massachusetts 02115

6/1/66 - 8/31/75

(\$124,543)

The objectives are to: (1) serve as a resource to stimulate graduate students in the master's degree programs in the Harvard School of Public Health and other graduate students from other faculties of the University, to enter into doctoral programs in medical care; (2) support an inter-faculty program in medical care teaching and research for doctoral candidates who are enrolled in the School of Public Health, Medicine, Business Administration, Government, Public Administration, the Department of Economics in the Faculty of Arts and Sciences, and Fellows of the Harvard Center for Community Health and Medical Care.

This program has produced people who can function in the area of health services research.

****Health Services Organization and Administration (TO1 HS 00006)**

Joel J. May, MBA
Center for Health Administration Studies
University of Chicago
5720 South Woodlawn Avenue
Chicago, Illinois 60637

1/1/69 - 6/30/79

(\$31,944)

The purpose of this project is to establish a program for graduate training relating to health services organization and administration leading to the Ph. D. degree.

In the course of graduate work, trainees will be exposed to the managerial sciences, economics, statistics, or behavioral sciences plus other courses which will be their base for a dissertation on some aspect of the health field. The Ph. D. will lead to careers in teaching and research and also operations. Four students during the first year and an additional two trainees during each successive year are to be supported under this project.

This project is directed toward the Center goal of training persons to become aware of the cost and utilization problems of health services management, as well as the techniques to deal with the problems.

****Social Sciences and Community Health Organization (TO1 NS 00009)**

Edmund N. Ricci, Ph.D.
University of Pittsburgh
Graduate School of Public Health
Pittsburgh, Pennsylvania 15213

3/1/66 - 6/30/79

(\$91,318)

The objective of this training grant is to offer pre-doctoral training to behavioral scientists in community health organization, and post-doctoral training on the evaluation of community health programs.

Following the first year of basic graduate study, students in sociology and in anthropology are selected for a special three-year graduate program leading to the Ph. D. degree. There is a concentration of course and thesis work on the organization of community health services.

****Medical Care Research Training (TO1 NS 00012)**

Kerr L. White, M.D.
Johns Hopkins University
School of Hygiene and Public Health
Baltimore, Maryland 21205

6/16/66 - 6/30/76

(\$241,618)

The objective is to provide research experiences and formal course work in medical care, health services administration, research methods, epidemiology, biostatistics, information systems, comparative studies of medical care systems, with the goal of training competent researchers in the field of medical care.

The approach is highly individualized and students take introductory courses in epidemiology and biostatistics and courses in medical care, research methods, and applications of research to medical care problems. The student's dissertation is his own research and is not approached through service as a research assistant. There is close supervision by one faculty member. Written comprehensive examinations are prepared individually for each trainee and tailored to his own program.

****Social Analysis and Evaluative Research in Health (TO1 HS 00016)**

Leo C. Beeder, Ph. D.
University of California
Los Angeles, California 90024

7/1/66 - 6/30/76

(\$116,530)

This application is for support of student training in social analysis, survey and evaluative research in the field of health. Emphasis is on social and behavioral science concepts, principles, methods and procedures.

There is a balance between methodological and substantive content in coursework and an ample opportunity for trainees to conduct health services research. There is a mix of students from sociology and from the School of Public Health.

****Training Program in Medical Sociology (TO1 HS 00019)**

Saxon Graham, Ph. D.
State University of New York
Buffalo, New York 12224

7/1/67 - 6/30/75

(\$15,000)

The purpose of the program is to provide training leading to a Ph. D. with emphasis on medical sociology. The ultimate aim is to increase the supply of investigators and teachers with a health services research background.

Opportunities have been made available to conduct graduate sociology research in: (1) epidemiology, (2) organization of medical care, (3) training of medical personnel, including physicians and medical scientists, (4) public health activities, including problems of evaluation of services and of the introduction of medical innovations.

There are six pre-doctoral students enrolled in this program.

****Research Training in Hospital Administration (TO1 BS 00022)**

John E. Griffith, M.S.A.
University of Michigan
Ann Arbor, Michigan 48106

7/1/69 - 6/30/75

(85,104)

The purpose of this project is to support candidates for the Ph. D. degree offered by the Rackham School of Graduate Studies for one or two years while they develop knowledge of health research application of their basic discipline.

Students must center their activities around their dissertation in hospital administration. Since the basic philosophy of the application is to supplement and not to interfere with the established doctoral programs at the university, the control of the degree content rests with the department offering the degree through the Rackham School. The Rackham department also approves the qualifications of individual students for admission and for completion of the degree.

This project relates to the National Center goal of recruiting and training high caliber individuals into the health field to conduct health services research. The program because of its multi-disciplinary approach is likely to recruit individuals to the health field who otherwise would not be attracted to this field.

****Medical Care Statistics (TO1 BS 00026)**

Philip Enterline, Ph.D.
University of Pittsburgh
Pittsburgh, Pennsylvania 15261

7/1/70 - 6/30/75

(840,660)

The purpose of this program is to train students at the Master's degree level as statisticians in the field of medical care. Upon completing the program, students should be qualified for research positions as medical care statisticians in such areas as government, health planning agencies, health research organization, and health insurance plans.

Students receive, in addition to training in biostatistics and computer science, an introduction to medical and hospital administration, public health practice, and epidemiology. Health agencies in the community are utilized as bases for field training, on which great emphasis is placed.

Training in biostatistics is necessary for almost all quantifiable research and/or development projects in the health services. This program is currently in its second year and expectations for the future are good.

**Traineeship in Health Care Research (TO1 HS 00029)

Bright H. Dornblaser, MEd
University of Minnesota
Minneapolis, Minnesota 55455

9/1/70 - 8/31/75

(897,121)

The emphasis is on preparation for teaching, planning, and research and centers about organization and administration of health services; social political and economic aspects of health care; research and methodology in health care; and comprehensive health planning.

Trainees can select a second major field or one or two minor fields from related areas in addition to the core curriculum. There are provisions for strengthening the background of trainees in public health where previous training in this area is lacking. In addition to course work at the university, students may obtain training and experience from outside organizations such as the American Rehabilitation Foundation, the Northlands Regional Medical Program, and the Minnesota Hospital Association.

The program is expected to produce people who will function in the area of health services research.

**Sociomedical Research Training (TO1 HS 00032)

Jack Flinnom, Ph. D.
Columbia University
New York, New York 10027

7/1/70 - 6/30/75

(8160,404)

The objective is to add to the pool of researchers and teachers trained to apply social science theory and methodology to the study of health care needs.

A multidisciplinary graduate program on a master's level in public health, with movement to the doctorate level. The program will be in sociomedical research training. The dissertation must embody original research in some application of social science. Students are recruited from the graduate schools in psychology, sociology, and political science. Their degree will then be a Ph. D. in one of the behavioral sciences. Research has to be in the health area.

****Biostatistics Training for Health Services Research (TO1 HS 00034)**

Paula S. Diehr, Ph.D.
University of Washington
Seattle, Washington 98105

7/1/70 - 6/30/75

(\$82,639)

This training program in biostatistics and related fields leads to a Master of Science and Ph.D. degrees with particular emphasis on techniques and methods appropriate for quantifying: (1) health problems of population groups; (2) services needed to eliminate these problems; and (3) the effectiveness and costs of these services.

Training in biostatistics is necessary for almost all quantifiable research and/or development projects in the health services.

****Epidemiology (TO1 HS 00036)**

John C. Cassel, M.D.
University of North Carolina
Chapel Hill, North Carolina 27514

7/1/70 - 6/30/75

(\$156,683)

The objective is to support¹⁷ advanced training leading to the M.S., Dr.P.H., or Ph.D. degrees in epidemiology. The program concentrates on training personnel to solve two interrelated but separate sets of problems: the nature of disease to its causes and selected aspects of the delivery of health services.

The four main categories of health services research in the department are: (1) community diagnosis; (2) determinants of utilization and compliance; (3) the effectiveness and efficiency of the delivery of health care; and (4) methodological skills. In addition to formal course work, seminars and individual readings, and their own research, students in the program will have two other sets of educational experiences: (1) participation in teaching; and (2) assisting the faculty in research consultation.

Achievement of the Center's goal of quality assessment is enhanced by the development of researchers skilled in techniques of effectiveness measurement and recording of epidemiological data.

****Biostatistical Training for Health Services Research (TO1 HS 00037)**

Charles F. Federspiel, Ph.D.
Vanderbilt University
Nashville, Tennessee 37203

6/1/70 - 6/30/75

(\$73,967)

The general aim of this program is to provide basic research training in data collection techniques and in statistical theory and method. The program is intended to be a terminal master's degree training program in biostatistics.

Training in biostatistics is an interest of the Center and is necessary for almost all quantifiable research and/or development projects in the health services. This program is cooperating with the TVA, a pre-paid health insurance group, and a Health Services Research Center in a number of projects, and expectations for the future are excellent.

****Sociology and Health Services (TO1 HS 00039)**

George Prathan, Ph. D.
Boston University
Boston, Massachusetts 02215

7/1/70 - 6/30/75

(\$140,700)

this is a doctoral program in sociology to: (1) provide training in research competence; (2) familiarize trainees with the field of health services; and (3) expose students to health field settings, and develop research skills.

Program consists of course work in sociology, emphasis on research skills, research developed through placement in health settings, and individual study under faculty guidance.

Field experiences have been marked out in two areas of interest, i.e., consumer input to health services and community decision making in health services.

****Social Science and Health Service Training Program (TO1 NS 00044)**

Stan Ingman, Ph.D.
University of Connecticut Health Center
Hartford, Connecticut 06105

7/1/70 - 6/30/77

(\$89,751)

The objective is to prepare anthropologists and sociologists to work on the solution of health service problems through research and teaching efforts in academic or patient care settings.

****Biostatistics Related to Health Services (TO1 NS 00045)**

Dennis B. Gillings, Ph.D.
University of North Carolina
Chapel Hill, North Carolina 27514

7/1/70 - 6/30/79

(\$101,598)

The objective of this training program is to prepare biostatisticians for the conduct of research in health services and the provision of statistical support to other research workers in that field. The level of training is predominately doctoral leading to the Ph.D. degree in biostatistics, with provision for training, at the master's level, personnel for subsidiary roles in the statistical support of health services research.

Training in biostatistics is necessary for almost all quantifiable research and/or demonstration projects in the health services. This program is currently in its second year.

**Sociology of Health Care (TO1 NS 00046)

Rene C. Baetsch, Ph. D.
University of Missouri
Columbia, Missouri 65201

7/1/70 - 6/30/75

(\$117,431)

The objectives is to train graduate students in the sociology of health care.

An effective link has been established between the Sociology Department and laboratory opportunities in the Medical Center at the University. Interdisciplinary exposure is thus provided for medical students and medical sociologists.

This program's interest is in the differences in rural and urban access problems to the health care system.

**Health Services Research Psychologist Training (TO1 NS 00049)

James H. Bryan, Ph.D.
Northwestern University
631 Clark Street
Evanston, Illinois 60201

7/1/70 - 6/30/75

(\$64,460)

The purpose of this graduate program in psychology is to train skilled researchers with a focus on the concepts and methods of scientific psychologists and their contributions to problem solving needed in health services organization and delivery.

Course work is required in the Department of Psychology with possibilities in the allied Departments of Sociology, Anthropology, and Political Science Field. Research is to be conducted in Evanston Hospital and Northwestern University Medical School.

The types of research in which the students are engaged are relevant to the NCHSRD.

****Biostatistics (TO1 HS 00051)**

Paul S. Anderson, Jr., Ph.D.
University of Oklahoma Health Science Center
800 N.E. 15th Street
Oklahoma City, Oklahoma 73104

4/1/57 - 6/30/75

(\$41,530)

The primary objective is to provide fundamental training in biostatistics to graduate students leading to the Ph.D. degree. It is anticipated that the emphasis of this program will primarily prepare and stimulate students for academic and research careers. A secondary objective is an attempt to create an awareness of the importance of statistical concepts and methodology in public health and medical research. Thus, courses offered in this program are available to any Medical Center trainees or personnel, such as graduate students in other disciplines, including medical students, post-doctoral fellows, interns, physicians, or other research personnel, who have the appropriate prerequisites.

The NCHSPD is interested in training in biostatistics for almost all quantifiable research and/or development projects in the health services.

****Biometry (TO1 HS 00053)**

James B. Boen, Ph.D.
University of Minnesota
Minneapolis, Minnesota 55455

10/1/53 - 6/30/75

(\$145,022)

This program is primarily concerned with the training of research biometricians at the Ph.D. level.

The program requires formal course work in theoretical statistics, mathematical biology, statistical techniques for biomedical applications, and computer techniques for biomedical applications. The program emphasizes actual problem solving, both in formal course work and in consulting seminars and practice.

Training in biostatistics is necessary for almost all quantifiable research and/or development projects in the health services. This program is currently cooperating with several university-based hospitals, the Mayo Clinic, and the local Veterans' Administration Hospital on several projects.

****Biostatistics for Health Care Evaluation (TO1 HS 00050)**

Stanley S. Schor, Ph.D.
Temple University
Philadelphia, Pennsylvania 19140

7/1/71 - 6/30/75

(\$15,050)

The purpose of this training program is to give medical workers or potential medical workers, i.e. physicians, nurses, social workers, medical economists, a sound foundation in biostatistics so that they will be qualified to design studies in order to evaluate various ways of organizing health services and various methods of delivery of health care.

****Training in Health Services Research (TO1 HS 00063)**

H. Clinton Miller, III, Ph.D.
Medical University of South Carolina
Charleston, South Carolina 29401

7/1/71 - 6/30/77

(\$139,001)

The purpose of this program is to produce consultants in the design, analysis evaluation, and review of programs and research in the biological and health sciences, and persons to conduct independent research in biometry.

The focus of training is on applications of existing methodology to specific informational problems and the development of new methodologies and analytic techniques.

As such, it addresses itself to the three major goals of the HCHSRD: equity of access, containment of costs, and maintenance of quality.

****Metropolitanization and Delivery of Health Services (TO1 HS 00064)**

Basil Zisser, Ph.D.
Brown University
Box 1913
Providence, Rhode Island 02912

7/1/70 - 6/30/75

(\$101,811)

The purpose is to provide basic sociologic training on the Ph. D. level with emphasis on theory, methods, and computer application for students whose major interest is urban sociology.

The training program will be focused on the metropolitan community and the problems of providing health and other community services within the context of this type of community.

This training program is located in a State where the NCHSPD has one of its first State-wide community projects, and the Department itself has one of the human population laboratories. The Department has also served as a personnel resource for the Center in that State.

****Health Law (TO1 HS 00066)**

Nathan Hershey, LL.B.
University of Pittsburgh
Graduate School of Public Health
Pittsburgh, Pennsylvania 15213

7/1/70 - 6/30/75

(\$75,083)

The objective of this training program is to develop the ability and skills of attorneys through formal instruction and related research and service activities in order that they may better be able to participate in health services planning and program implementation.

All of the National Center's primary goals are served by such programs as this, in that lawyers so trained in the health services area will help to resolve legal problems and remove barriers affecting the implementation of innovative measures that make for the greater accessibility of health care, as well as to moderate the cost and assure good quality.

****Health Services Training: Biostatistics (TO1 HS 00067)**

Richard E. Remington, Ph.D.
University of Texas School of Public Health
Houston, Texas 77025

7/1/71 - 6/30/76

(\$84,528)

This training program combines two programs, offering degrees in biometry to students whose orientation will be toward applied research in the provision of health care. In addition to quantitative methods applicable to the study of health services systems, training will also be provided in research design, computer technology, health planning, and health administration.

This program addressed itself to the NCHSRD's three major goals of equity of access, cost containment, and maintenance of quality.

****Doctoral Training Program in Health Services Research (TO1 HS 00068)**

Roger M. Battistella, Ph.D.
Cornell University
Ithaca, New York

7/1/71 - 6/30/79

(\$63,007)

This grant is to support a doctoral training program to prepare researchers in disciplinary skills which would be useful in solving the complex problems of public policy, administration and planning, organization, finances, and delivery of personal health services.

The proposed program will be the first doctoral level program in the health service administration field. The major will be in medical care organization and administration with minors taken elsewhere.

The Cornell setting provides a program with a tradition of interdisciplinary research in close cooperation between various departments. The one drawback to this program is the limited exposure to the medical profession in medical settings due to the distance between Ithaca and New York City.

****Technology in Health Care (TO1 NS 00074)**

Jerome R. Cox, Jr., Sc.D.
Washington University School of Medicine
St. Louis, Missouri 63110

7/1/70 - 6/30/75

(\$224,599)

The objective of this training grant is to increase the effective use of engineering and computer science for improved delivery of health care by integrating and augmenting several existing programs at Washington University.

This program will train students in the methods and techniques of conducting research and development in the applications of technology in health care systems. Training opportunities will be provided for engineers and physicians with maximum emphasis on interdisciplinary cooperation.

There is interest in this project because of its potential in relieving the critical shortage of health care personnel especially in an area where technological components can be inserted into the Health Care System for the purpose of increasing accessibility, and maintaining costs at the accepted quality level.

****Research Training in Health Services (TO1 NS 00075)**

Odin W. Anderson, Ph. D.
University of Chicago
Chicago, Illinois

7/1/70 - 6/30/75

(\$91,920)

This program is to support doctoral training of sociologists with emphasis on medical sociology.

The students will be exposed to a variety of other disciplines and have opportunities for faculty interchange or courses at the School of Business, School of Medicine and the Michael Reese Hospital.

This work in the health services utilization and health behavior research is very pertinent to NCHSRD goals.

****Health Training Program in Sociology (T01 HS 00078)**

William A. Rushing, Ph. D.
Vanderbilt University
Nashville, Tennessee

7/1/71 - 6/30/75

(\$120,929)

The purpose of this grant is to train graduate sociology students to conduct independent research on the health services institution and its component parts.

The training program offers a four-year sequence, with exposure to all phases of the research process (problem formulation, data collection, data analysis, interpretation and write-up). The major structural mechanism by which the trainee will achieve entree to components of the health service institution is the Tennessee Mid-South Regional Medical Program. Hence, research on the health care process as it exists at the community level facilitated.

As the Project Director is involved with studies of hospital organization and social structure, and health services studies in rural areas, this grant is closely related to the mission of MCNSRD.

****Health Services Training (T01 HS 00085)**

Paul M. Densen, Sc. D.
Harvard Medical School
Boston, Massachusetts

9/1/70 - 8/31/75

(\$41,436)

This is a training project designed to motivate participants to seek careers in the health services field.

It is expected that upon completion of the program fellows will be involved in the planning and delivery of health services in various institutional capacities; while a number of the college students will become interested in pursuing graduate training in the health sciences, thus broadening the base from which persons are recruited to the field.

The program is expected to produce people who will function in the area of health services research.

****Health Services Research Training Program (TO1 NS 00090)**

Donald C. Riedel, Ph. D.
Yale University
New Haven, Connecticut 06510

7/1/70 - 6/30/75

(\$228,167)

This grant is for the development of a doctoral and post-doctoral training program in health services research.

The degree offered in this program is that of doctor of philosophy and to qualify, students must meet the requirement of the graduate school as well as the prospective Ph. D. program in health services research under the auspices of the Institute of Social Science in the University.

In the first year trainees take health care courses; in the second year they complete a pre-dissertation research project and additional course work; in the third year they spend full time developing the dissertation in close conjunction with their advisory committees.

The program is expected to produce people who will function in the area of health services research.

****Sociological Training in Health Services Research (TO1 NS 00091)**

David Rechanic, Ph. D.
University of Wisconsin
Madison, Wisconsin 53706

7/1/71 - 6/30/76

(\$90,380)

This application proposes a training program of health care services research with a strong interdisciplinary emphasis in a Department of Sociology.

It builds on core training in sociology (including medical sociology, social organization, social psychology, and demography and ecology), strong research training in methods and statistics, and an interdisciplinary perspective with primary emphasis on understanding the workings of health care systems in terms of social forces, economics, and medical-legal aspects.

This research in the area of consumer and professional behavior is relevant to SCHSRD goals.

****Health Care Systems Design Training Program (TO1 HS 00103)**

Louis Freund, Ph. D.
University of Missouri
Columbia, Missouri

7/1/71 - 6/30/76

\$ (119,726)

The objective of this Industrial Engineering Ph. D. program is to provide an educational experience which will equip the graduate to design health care delivery systems, carry out research in this problem area and to develop this expertise in others and to further enhance the acceptance of innovative change within the health care environment.

The educational program includes three major areas of emphasis: (1) an in-depth study of the latest tools and techniques of systems analysis and design; (2) an understanding of medical care and the organization of health care delivery systems; and (3) student involvement in an intensive health care systems design experience. The program culminates in a research project whose emphasis is focused on the development of new tools or unique applications of existing technology to the design or analysis of health care systems.

Graduates of this program will be active in the design and administration of innovative health programs, as well as in research. The quantitative training and practical experience obtained will enable them to design and operate more efficient systems by applying cost control techniques without neglecting the importance of quality and access.

****Community Health Training for Physicians (TO1 HS 00106)**

James G. Zimmer, M.D.
University of Rochester, School of Medicine and Dentistry
Rochester, New York 14620

7/1/71 - 6/30/76

(\$118,327)

The objective is to provide training in community medicine for physicians planning a career in community health services.

Basic course requirements will be limited, and a major emphasis will be placed on field work in: (a) Health Services Administration; and (b) Health Services Research. The program is to be supervised by a multidisciplinary faculty. In the area of health services administration, the trainees will be concerned with team direction and organization, consumer participation, evaluation of quality of care, cost benefit analysis and establishment of priorities. Provision is also made for summer training of medical students in field experience in health services administration and research.

The program is expected to produce people who will function in the area of health services research.

****Graduate Training in Biostatistics (T01 HS 00116)**

Leonard Chiazze, Jr., Sc.D.
Georgetown University
Washington, D.C. 20007

7/1/71 - 6/30/77

(\$114,293)

The objective is to provide graduate training in biostatistics for careers in the health profession and to train students in the application of quantitative and research methods to problems in medicine, community medicine, and public health so that they can participate effectively in research and in solution of health problems.

The program is a 12-month intensive program involving courses and actual experience in health agencies. Students, selected from a variety of majors at the bachelors level, are given two semesters of courses in statistics, health care systems, and computer use. The general approach is one which gives as much attention to acquisition and interpretation of data as to analytical techniques. Therefore, participation in research is an essential component of the program and is built into the core requirements for each semester.

This project assists in the continuing education of biostatisticians to provide them with skills for solving health problems.

****Faculty Institute on Medical Care Teaching (T01 HS 00128)**

William McBeath, M.D.
American Public Health Association
Washington, D. C. 20036

7/1/71 - 1/31/75

(\$64,908)

The objective is to conduct a short-term (two-week) Training Institute for teachers, researchers, and administrators in the field of medical care organization. The basic course will be a general introduction to the elements, interrelationships and major issues in medical care organization. The advanced courses will deal in depth with specific subareas of medical care organization.

The institutes will increase the trainees' awareness of the key health services research issues of cost, quality, and access, and stimulate research on them.

****Community Medicine Scholarship Program (T01 HS 00132)**

Barbara H. Starfield, M.D., M. P. H.
Johns Hopkins University
Baltimore, Maryland

7/1/71 - 6/30/76

(\$48,290)

This grant is to support training for combined clinical residency in pediatrics with academic course work and supervised research. The program will be primarily for the education in the area of health services research.

NCHSRD is interested in professional educational processes and in testing various training approaches to determine if they produce physicians who are more productive and competent. One of the secondary training goals is to produce clinical scholars in community medicine.

****Evaluation of Health Services Delivery Systems (T01 HS 00149)**

Robert L. Eichhorn, Ph. D.
Purdue University, Department of Sociology
Lafayette, Indiana 47907

7/1/71 - 6/30/76

(\$170,553)

This training program will prepare graduate students in sociology for research careers in evaluating the performance of health services delivery systems. Special emphasis will be placed upon estimating requirements for health services of defined populations, access (and barriers) to the delivery system and the utilization of services. At the completion of the training program, each sociologist will be: (1) thoroughly trained in his discipline, (2) capable of designing, executing and analyzing evaluative research, (3) familiar with the main features of the organization of health services in the United States and its attendant problems, and (4) sensitive to the needs of administrators who have responsibility for operating or policy decisions.

The training program will parallel the research activities of the faculty at work on the development of a health services data system for monitoring, evaluation and management purposes. Ultimately, data systems will be installed and evaluated in communities working to improve the delivery of health services. This is a cooperative effort involving the University, government and some of the experimental health services delivery systems.

The focus on the evaluation of health delivery systems in this program is of top priority.

****Research Training in Medical Economics (T01 HS 00155)**

Lee K. Benham, Ph.D.
University of Chicago
Chicago, Illinois

7/1/71 - 6/30/74

(No Funding FY 74)

The purpose of this program is to produce competent economists who will be involved in some aspect of research and teaching of medical economics. The proposed program would combine the present the Ph.D. program in the Department of Economics at the University of Chicago with training in the Center for Health Administration Studies in medical economics. The program would support Ph.D. students during the latter part of their training after they had passed their core examination. Courses in the medical economics area would familiarize the students with the current state of knowledge.

****Training in Health Services Research at UCSD (T01 HS 00156)**

Joseph Stokes, III M.D.
University of California, San Diego
Dept. of Community Medicine
P. O. Box 109
La Jolla, California 92037

7/1/72 - 6/30/75

(\$84,487)

The purpose of this program is to train undergraduate medical students, graduate students and post-doctoral fellows in health services research with three different sources of student recruitment, as follows:

- (1) Undergraduate medical students at UCSD who wish to extend their period of undergraduate medical training from four to five years to pursue a masters degree in either Economics, Administrative Sciences, applied Mechanical and Engineering Sciences, Applied Physics and Information Science, or Sociology;
- (2) Ph. D. candidates of the above departments interested in specializing and conducting thesis work in health services research; and
- (3) Post-M.D. and Post-Ph. D. candidates with interest in one year post-doctoral training in health services research.

****Political Science and Health Policy (T01 HS 00161)**

Ralph A. Straetz, Ph.D.
New York University
New York, New York

7/7/72 - 6/30/76

(\$138,784)

To provide support for students with advanced training or who have had some professional work experience, in a program leading to a Ph.D. degree in Political Science. The emphasis of this program will be in the area of health policy.

****Health Service Administration Training Program (T01 HS 00172)**

Count Gibson
Stanford University
Stanford, California

7/1/72 - 6/30/75

(\$97,100)

To develop research oriented administrators for public and private health organizations. Emphasis is placed on fundamental training that will enable graduates to adapt to changes in health delivery modes, health services organizations, and the roles of health services administrators. The program will enroll students who are pursuing a graduate degree in another discipline at Stanford University and Award and MS degree in Health Services Administration as a "Second Degree" upon successful completion of the Training.

****Standardization of the MUMPS Computer Language (730001 InterAgency)**

S. Jeffries
National Bureau of Standards
Gaithersburg, Maryland

11/1/72 - 6/30/74

(\$315,000)

This Agreement was initiated during FY 73 to conduct a study to determine: "Is the programming language MUMPS an appropriate language for use in medical applications" "If so, what steps should be taken to increase its suitability for wide-scale replication?" The primary deliverable was a 65 page report "MUMPS": A Preliminary Study describing the evolution and current applications of the language. In FY 74 it was extended to include the development and implementation of a methodology to produce a standard MUMPS language specification. The object was to enhance the exportability and accelerate the deployment of the many MUMPS medical application programs under development. Emphasis was placed on four key activities: (1) the development of the standard language specifications, (2) the preparation of a MUMPS primer, (3) the development of documentation procedures for the exportation of MUMPS, and (4) the support of the MUMPS Users' Group to insure that all activities of the Agreement were widely disbursed among the medical community. In FY 75 an interim award further extended the Agreement to enable the NBS to continue its coordination and participation role in the establishment of a Standard MUMPS Language Specifications. The Agreement specifies the delivery of "Standard Language Specifications", the "Primer", the "Level 1 Standard" (for portability), and the "Documentation Manual" as final reports.

****Alternatives to Institutionalization for the Aged (AOA 93-HD-75200)**

Walter E. Beck
Colorado Department of Institutions
328 State Services Building
1525 Sherman Street
Denver, Colorado 80203

6/22/72 - 2/28/75

(\$25,000)

This project is joint-funded with the Social and Rehabilitation Service, Administration on Aging, with AOA as the lead agency. The primary aim of this project is to improve the quality of life of the elderly offering specialized living arrangements as alternatives to institutionalized care at a lower cost to patients than either nursing home care or inpatient psychiatric hospitalization. This project proposes to show that patients selected for either the artificial family or boarding home program will enjoy a higher quality of life than if placed in some of the presently available alternatives.

****National Center for Aging and Black Aged (AOA 93-P-57566)**

Hobart Jackson
The National Caucus on the Black Aged, Inc.
Suite 402, 1725 DeSales Street, N.W.
Washington, D.C. 20036

7/1/73 - 6/30/76

(\$75,000)

This project is joint funded with the Social and Rehabilitation Service, Division on Aging (now Administration on Aging), with AOA as the lead agency. This project supports establishment of a Center to provide a comprehensive program of coordination, communication, information, and consultative services to meet the need for assistance in improving meaningful policies and programs involving aged blacks. Consultants will include researchers, educators, and scholars on the aged. Through knowledge gained from comprehensive review of research, the sound basis for program planning for black elderly will be built. Position papers will be produced and disseminated from the knowledge gained. The Center, as interpreter of the needs of the black elderly, will be available to provide consultation to agencies and organizations, both public and private, who desire assistance.

****Evaluation of Alternative Systems of Services for Aged at High Risk for Institutionalization (SRS 93-P-75172)**

George Maddox, M.D.
Eric Pfeiffer, M.D.
Duke University Medical Center, Box 3003
Durham, North Carolina 27710

7/1/71 - 6/30/75

(\$150,00)

Administration on Aging is the lead agency on this project which is now in its final year. BHSR has joined in funding the second and third year with a participating agency award of \$150,00 for FY 1974. This is a research and demonstration project designed to: (1) develop improved evaluation procedures to assess the impact of intervention on impaired elderly persons; (2) study the differential outcome of several alternative service delivery systems; (3) obtain accurate estimates of the true incidence of significant impairments among elderly persons, impairments which place them at high risk for institutional care; and (4) deliver, in the process of achieving the first three goals, actual clinical services to impaired elderly persons. The plan for FY 75 is to continue testing the instrument for reliability and validity and to continue in-depth study of the sample assessed one year ago.

****Demonstration and Evaluation of Integrated Health Care Facilities**
(HSM 110-70-368)

James P. Cooney, Jr., Ph.D.
Hospital Research and Educational Trust
840 North Lake Shore Drive
Chicago, Illinois 60611

6/29/70 - 11/30/74

(No Funding FY 74)

The purpose is to demonstrate and evaluate merged type of medical care, manpower utilization, education, and management practices in metropolitan, urban, and rural areas.

The approach employed is to evaluate an ongoing merger of nine institutions. The evaluation shall consist of analytical study of data extending from two years prior to merger to five and one-half years post merger. The evaluation will have four facets: (1) a detailed historical analysis of each member hospital; (2) detailed analysis of the organizational structure and administrative management; (3) a literature search and conduct of a National Survey to determine state of the area in mergers and shared services; and (4) a detailed analysis of the provision of services concentrating on costs, comprehensiveness of care, availability, quality and acceptance of the system. Additionally, the installation of a modular hospital information system will be evaluated in terms of effectiveness, cost operating problems, personnel acceptance and generalization abilities to other settings.

This project relates to the Center's goal of demonstrating and evaluating promising concepts in health care delivery.

****Research and Development to Design, Test and Evaluate a New Medical Care Delivery System** (HSM 110-70-407)

Morris F. Collen, M.D.
Kaiser Foundation Research Institute
506 16th Street
Oakland, California 94612

6/30/70 - 11/30/74

(No Funding in FY 74)

This study is to design, test and evaluate a new medical care delivery system determining its potential to provide quality services to more patients than can presently receive the care, through more efficient utilization of physicians, paramedical personnel, and technology.

The demonstration site is Kaiser-Permanente Health Plan in Oakland, California. The study population is drawn from the membership of the Plan. The system will be evaluated by changes in the distribution of the sick, early sick, worried well, and well patients in the physician's workload, changes in the workload of allied health personnel, physician and other staff reaction to the modified system, patient reaction to different care opportunities, and cost of delivery services.

****An Evaluation of the Consolidation of Clinical Laboratory Facilities
at the Northwestern University Medical Center (HSM 110-70-409)**

Sam A. Edwards, Ph. D.
Hospital Research and Educational Trust
840 North Lake Shore Drive
Chicago, Illinois 60611

6/29/70 - 8/31/74

(No Funding FY 74)

The purpose is to test the hypotheses that laboratory centralization will save cost, improve the quality of services, facilitate adaptability to technological change, improve laboratory-related education and research activities, and attract high caliber professional personnel.

Three major evaluate areas will be involved: (1) organizational, legal, and social processes in planning and implementing centralization; (2) effectiveness of centralization vis-a-vis quality, physician satisfaction, attitudes of laboratory personnel; and (3) efficiency of centralization in terms of cost savings.

****Federal Employees Health Benefits Program Utilization Study
(HSM 110-70-416)**

Joe C. Woosley, Ph.D.
Health Services Foundation
840 Lake Shore Drive
Chicago, Illinois 60611

6/30/70 - 2/15/76

(\$65,000)

The purpose of this study is to document the nature and magnitude of differences in utilization and expenditures for health services in a prepaid group practice plan and the government-wide service benefit plan of the Federal Employees Health Benefits Program, and to determine the influence of subscriber and provider characteristics on variation in use.

The study will focus on the Washington, D.C. employees and their families who are enrolled in the high-option plans of either Group Health Association or Blue Cross and Blue Shield. Comparisons shall be made of: (1) demographic and associated characteristics, (2) hospital and out-of-hospital medical care delivery and utilization patterns, and (3) patterns of care for episodes of illness of patients with selected diagnoses. The impact of the differences in the benefit structure on medical utilization and expenditures will also be examined. (This contract is related to HSM 110-72-271).

****Development of and Emergency Room Medical Team (HSM 110-71-119)**

Gail Anderson, M.D.
University of Southern California
School of Medicine
Los Angeles, California

6/18/71 - 6/30/75

(No Funding FY 74)

This developmental project is aimed at the problems of inadequately trained emergency staff in community hospitals.

The orientation is to develop training programs specifically tailored to the documented needs of medical care in the community hospital emergency room, including graduate training for physicians and for physicians' assistants who will work with them as an integrated team.

This program relates to the National Center's objective of increasing the quality of primary care via manpower innovation, with the explicit recognition that emergency room manpower is but one aspect of a complex area of great need.

****Demonstration of an Existing Hospital Information System (HSM 110-71-128)**

John G. Gall, Jr.
El Camino Hospital
Mountain View, California

6/23/71 - 8/31/74

(\$480,000)

This contract seeks to demonstrate the feasibility and benefits of a hospital communications system that has the capability of both hospital management and patient care management.

The contract is to provide a completely installed hospital information system which must be used in routine service and designed to handle the following functions: patient records; bed census lists; drug files; mental work on a Federal-State-Local Health Statistics Center. AHSF is presently developing a funds flow analysis of the State and has begun work leading to the development of uniform hospital discharge data and ambulatory care data. AHSF has also initiated activities leading to the organization of a state-wide PSRO. AHSF has initiated numerous developmental activities including: participating in the organization and development of the Pine Bluff Comprehensive Care Center; the Crittenden County Family Health Center; the development of a model health plan for New Towns in Arkansas; and the development of a Pediatric Nurse Practitioner training program. AHSF has planned and implemented a state-wide Emergency Medical System; the first phase of this effort will be implemented through a subcontract to the EMS Council of the Western District of Arkansas.

****Development, Testing and Evaluation of Alternative Health Services Data Systems & Components (HSH 110-71-150)**

Robert L. Eichhorn, Ph.D.
Purdue University
Lafayette, Indiana

6/29/71 - 6/30/74

(\$99,145)

To develop, test, and evaluate alternative health services data systems and components with particular emphasis on data requirements for assessing accessibility to, and utilization of health services.

The contractor will evaluate current data systems, develop and test selected data system elements, and ultimately evaluate total health service data systems in operation in community settings.

This contract relates to the Center's goal of developing health services data systems which can be used in a variety of innovative health care settings.

****Computerized Patient Management System for a Community Clinic (HSH 110-71-172)**

Carlos Vallbona, M. D.
Baylor College of Medicine
Houston, Texas

6/26/71 - 12/24/74

(\$815,445)

The objective of this project is to develop, implement and evaluate a computer system to provide clinical decision support for neighborhood health clinics in order to permit use of paramedical personnel in delivery of comprehensive health services.

To accomplish this objective, a system based on analysis of the existing delivery system in a small neighborhood clinic will be developed employing the use of automated algorithms for triage, follow-up and home care, adapting principles of proven utility and reliability.

This project supports the Center's interest in systems to be developed which will facilitate delivery of high quality medical care at reasonable cost to increased numbers of patients through use of qualified paramedical personnel.

****Develop Quality Assurance for Children and Youth Care (HSM 110-71-104)**

Charles E. Osborne Ed.D.
American Academy of Pediatrics
Evanston, Illinois 60204

6/30/71 - 12/31/74

(\$145,500)

The purpose of this contract is to develop and test criteria for the assessment of medical care for children.

Criteria will be developed for: health supervision (birth to one year, one year to five years, six years to 12 years, 13 years to 18 years); bronchial asthma; tonsillopharyngitis; urinary tract infection; patient records; and office facilities - equipment and procedures. These criteria will be subject to content validation by other clinicians and actual utilization in pediatric practice.

This project relates directly to the National Center's goal of improving the quality of medical care through the involvement of professional organizations in the medical care review and evaluation process.

****International Hospital Staffing Study**

(HSM 110-71-203)

Odin W. Anderson, Ph.D.
University of Chicago
Chicago, Illinois

6/23/71 - 6/30/75

(\$45,000)

The contractor is to conduct a comparative study of hospital staffing patterns in Sweden, the United Kingdom and the United States to determine: (1) if the lower staffing ratios in Swedish and United Kingdom hospitals mean that they are more efficient; (2) if so, where savings can be realized in the use of hospital personnel; (3) what effect hospital size, scope of services, average length of stay, occupancy rate, and the like have on hospital staffing patterns; and (4) what different tasks are being performed by different types of personnel in the three countries and the extent to which this can be adapted.

This contract is aimed at one of the Center's goals of determining methods for containing the costs of medical care. If alternative hospital staffing patterns can be used in the United States, as they are in the United Kingdom and Sweden, there may be significant cost savings.

****Experimental Health Services Delivery System (HSM 110-71-228)**

Walter Diggs
Health Systems Management, Inc.
1303 Medical Center Towers Building
969 Madison Avenue
Memphis, Tennessee 38104

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6/29/71 - 9/30/75

(\$109,000)

Health Systems Management, Inc. (HSM) is comprised of representatives from DeSoto County, Mississippi, Crittendon County, Arkansas, and Selby County (Memphis) Tennessee. Data system efforts of HSM include a neighborhood health status survey to provide baseline data for evaluation of future system changes, and a funds flow analysis which is the first of its kind for the greater Memphis area. A major data system is being designed for the City of Memphis public hospital, its out-patient clinics, satellite clinics and physicians offices. HSM has undertaken numerous developmental activities including assisting in the development of two family health centers, and preliminary work on the establishment of capitation rate for the centers. HSM has also acted in concert with RHP and the State Health Department in emergency medical system activities which have led to a Robert Wood Johnson grant for a major six county EMS communications systems; HSM has undertaken the training of emergency medical technicians for RHP, and has begun activities which should result in the establishment of a Professional Standards Review Organization (PSRO) for Memphis.

****Experimental Health Services Delivery Systems (HSM 110-71-229)**

Charles D. Gulley
Arkansas Health Systems Foundation
South Plaza Building, Suite 400
Sixth and McKinley Streets
Little Rock, Arkansas 72205

6/29/71 - 9/30/75

(No Funding FY 74)

The Arkansas Health Systems Foundation (AHSF), was developed by a consortium of health interest in the State. AHSF has adopted a master plan for a health services data system and a state-wide neighborhood health interview survey. Other activities undertaken include: the completion of a Nursing Home Cost Study, a management study of the Miller County Health Department, and developmental work on a Federal-State-Local Health Statistics Center. AHSF is presently developing a funds flow analysis of the State and has begun work leading to the development of uniform hospital discharge data and ambulatory care data. AHSF has also initiated activities leading to the organization of a state-wide PSRO. AHSF has initiated numerous developmental activities including: participating in the organization and development of the Pine Bluff Comprehensive Care Center; the Crittendon County Family Health Center; the development of a model health plan for New Towns in Arkansas; and the development of a Pediatric Nurse Practitioner training program. AHSF has planned and implemented a state-wide Emergency Medical System; the first phase of this effort will be implemented through a subcontract to the EMS Council of the Western District of Arkansas.

****Experimental Health Services Delivery System (HSN 110-71-230)**

O. Brandon Hull, M.D.
West Texas Health Systems, Inc.
1215 Avenue "K"
Lubbock, Texas 79401

6/29/71 - 9/30/75

(No Funding FY 74)

West Texas Health Systems, Inc. (WTHS) was created in June, 1972. It covers Lubbock County, Texas, with a population of 179,292. WTHS is currently developing a management information system through subcontracts with staff of Texas Tech University in Lubbock. Components of the information that have been completed to date are a uniform hospital discharge abstract survey, a three phase survey of ambulatory encounters including physician encounters, a household information survey and funds flow analysis. Data on long term care and on health and welfare agency encounters are now being collected. WTHS was recently awarded funds for the development of an emergency medical system in Lubbock, and as part of the local commitment has obtained a significant contribution out of revenue sharing funds from the county commissioners for the purchase of new emergency equipment. A consumer education program, including a Tel-Med component, is being used toward overcoming cultural and language barriers experienced by a largely underserved Mexican American population. Efforts toward the development of a family health center have led to the delivery of services in a facility contributed by the County, with medical staff provided by the Texas Tech School of Medicine.

****EXPERIMENTAL HEALTH SERVICES DELIVERY SYSTEMS (HSN 110-71-231)**

Mr. Alan J. Charron, Director
Health Planning Agency of Human Services
128 State Street
Montpelier, Vermont 05602

6/29/71 -- 6/30/75

(No Funding FY 74)

(No Funding FY 75)

Vermont Health Systems, Inc. (VHSI) was created to function as the EHSDS in July 1972. The new corporation voted to dissolve itself in favor of a Governor's Commission on the Organization of Health Services in March 1973. The EHSDS contract was subsequently transferred to the State Agency of Human Services which serves as the fiscal and administrative intermediary for the Commission. The Governor's Commission represents public and private health interests with members of the State Legislature representing the public. The Commission was organized to prepare a report to the Legislature which was to define the purposes of a health authority and to recommend legislation for a health authority. A series of proposals had been developed to improve the management of public and private health resources and create a State-wide and regional organization for the delivery of Emergency Medical Services. Efforts were intended to lead to more efficient utilization of health programs supported through public funds, the development of standards for operationalizing amendments to Title XIX and other third party payment programs, and the establishment of better management data in conjunction with the Vermont Cooperative Health Statistics program.

****Experimental Health Services Delivery System (HSN 110-71-232)**

Frank Aguilera
East Los Angeles Health System, Inc.
1904 E. Bailey Street
Los Angeles, California 90033

6/30/71 - 9/30/75

(\$293,000)

Priorities of East Los Angeles Health System, Inc. (ELANSI) have been focused on the development of primary care services and facilities in East Los Angeles. ELANSI has rendered support to the development of a family health center and an ORO neighborhood health center, and recently assisted in the successful merger of two organizations. Experience acquired by ELANSI in the preparation of prepayment health mechanisms is being used to develop options at the health centers for prepayment of general assistance recipients and their non title III eligibles, with possibilities of sliding fee scales for those above poverty margins. ELANSI has performed a household survey for East Los Angeles that would appear to have the highest response rate for any survey of its kind in a similar area. ELANSI has also performed a special of Spanish American health needs. The design of funds flow analysis prepared by ELANSI for two districts of East Los Angeles is also being applied to other areas of Los Angeles. Because of elaborate EMS planning efforts which are underway in the Greater LA region, studies are also being undertaken to examine the current EMS utilization patterns of the target sub-populations (Spanish-speaking and Spanish surnamed) in terms of the likelihood that the county-wide plan will be adequate to meet their specific needs.

****Experimental Health Services Delivery Systems (HSN 110-71-234)**

Mr. Clarence Traum, Executive Director
Health Care Management Corporation of
Northeastern Pennsylvania
1011 Oak Street
Pittston Township, Pennsylvania 18640

6/30/71 - 9/30/75

(\$200,000)

Health Care Management Corporation of Northeastern Pennsylvania (HCNC) represents an eight county region with a population of 750,000. HCNC was instrumental in coordinating resources to provide emergency medical services needed as a result of the flood in 1972. Activities included assessing demand for medical services and coordinating resources to meet needs and establishing a basic medical care referral and monitoring system. HCNC is looking at ways to develop and integrate new programs into long range development. As a result of HCNC efforts, two hospitals have agreed to merge and others are considering shared services. A group purchasing plan has been implemented, tying into a plan outside the region, thus further introducing economies of scale. It is exploring development of an Area Health Education Center or other appropriate means to develop needed manpower. A study is under way to determine the most feasible approach to develop new nursing home beds to replace those lost in the flood. HCNC is also undertaking an analysis of the implications of the 1972 flood. This will include recommendations for future emergency preparedness for the region and implications for natural emergency preparedness and response.

****Experimental Health Services Delivery Systems (HSM 110-71-253)**

Mr. Ronald Brand, Executive Director
Health Services Management, Inc.
3590 N. Meridian Street
Indianapolis, Indiana 46208

6/30/71 - 9/30/75

(\$10,000)

The Health Services Management Corporation (HSM) is attempting to improve health services delivery in Indianapolis by building on and attempting to rationalize existing health services, rather than adding to the number and types of services now available. The corporation is currently engaged in a number of efforts designed to help rationalize various segments of the health delivery system of Indianapolis. These include: (1) the development of more cost effective methods for utilizing existing emergency medical services; (2) improving the availability and utilization of obstetrical and gynecological treatment resources; (3) evaluation of the availability of services, facilities, and organizations for the treatment of alcoholics; (4) an analysis of transportation patterns focused on the public, community leaders, and provider organizations and institutions as to the accessibility of health facilities for all citizens; (5) a determination of the most effective use of Indianapolis' neighborhood health centers; (6) an evaluation of the availability and utilization patterns of home health care facilities; and (7) an analysis of health manpower availability and needs.

****Experimental Health Services Delivery System (HSM 110-71-254)**

J. Wendell Ramey
Mon Valley Health and Welfare Council, Inc.
P. O. Box 64, Eastgate 8
Monessen, Pennsylvania 15062

6/29/71 - 9/30/75

(\$35,000)

The Mon Valley Health and Welfare Council (MVHWC) represents portions of three counties in Southwest Pennsylvania with a population of 110,000. MVHWC's major accomplishments relate to the development of its management information system. An extensive collection of ambulatory care data is providing utilization data on 75 percent of all health and welfare services. The data has led to changes in the allocation of delivery of health and welfare services. Other components of the data system include the early availability of uniform hospital discharge and baseline evaluation data from a household information survey. The availability of uniform hospital data has been facilitated by a merger of the area's two hospitals. Studies performed by the MVHWC have led to significant modifications in the design of a new general hospital and may even change the proposed location of it. Other studies by the project staff have included a physician attitude survey relating to prepayment mechanisms, a study which led to the consolidation of two welfare agencies, and a cost effectiveness evaluation of mental health and retardation services. A mental health contract has been signed with the Commonwealth of Pennsylvania to implement the mental health data system in ten other counties and to do a feasibility study within 28 other counties.

****Experimental Health Services Delivery System (HSM 110-71-255)**

Daniel F. Creasey
 NY-Penn Health Management Corporation
 306 Press Building
 19 Chenango Street
 Binghamton, New York 13901

6/29/71 - 9/30/75

(\$40,000)

The NY-Penn Health Management Corporation (HMC) is representative of three counties in Southern New York and two in Northern Pennsylvania with a total population of 407,000. Activities to date include the development of a management information system with efforts directed at developing a funds flow analysis, and a community health profile. Other activities are directed toward community education and information through three types of news media and a newspaper with a circulation of 7,000.

Specific major projects undertaken by HMC include the development of four funded primary health care centers for a portion of the underserved areas. These sites are associated with group practices and hospitals. Six National Health Service Corps' physicians have already been secured for two of the rural counties. Through these centers and the use of the HMC physicians, further information will be developed and incorporated in the ambulatory care network. Other projects such as those in Emergency Medical Services and Mental Health have developed significant data and workable plans for improving these systems. In addition a medical program for the elderly has been developed and funded in conjunction with county agencies for the aging. A peer review organization is also under development.

****Experimental Health Services Delivery System (HSM 110-71-256)**

John C. McMeekin
 Philadelphia Health Management Corporation
 13th Floor, 530 Walnut Street
 Philadelphia, Pennsylvania 19106

6/29/71 - 9/30/75

(\$266,471)

The Philadelphia Health Management Corporation (PHMC) was created in November 1972 to coordinate the management of health care resources in Philadelphia. With the endorsement of the city government, the State government and major provider, payor and public organizations, the corporation has developed its operational objectives in a number of significantly impacting areas. The establishment of an Emergency Medical Services (EMS) Council successfully coordinated city fire and police departments with ongoing providers toward implementation of a 911 telephone system. Several Emergency Medical Technician programs have been implemented, and common data forms have been designed for rescue squads and emergency rooms. Development of a EMS cost accounting system and an examination of the utility of information derived from system models are underway. As part of its HMC activities, PHMC is preparing a program for capitation of 50,000 medicaid recipients in North Central Philadelphia. A major contract with the State has been negotiated and is being implemented for the conduct of an Early Periodic Screening Diagnosis and Treatment (EPSDT) program for all Medicaid eligible children in Philadelphia. In January 1974, the PHMC was formally designated by the Philadelphia Bicentennial Commission to coordinate and develop all of the health service proposals of a major Bicentennial Health Program for Philadelphia.

****Experimental Health Services Delivery Systems (HSH 110-71-257)**

Douglas Mitchell, Executive Vice President
Health Systems, Inc.
3131 West State, Suite 201
Boise, Idaho 83702

6/30/71 - 9/30/75

(No Funding FY 74)

A consortium of health interests established Health Systems, Inc. (HSI) in May 1972. HSI is representative of twelve counties (10 in Idaho, 2 in Oregon) that make up the Treasure Valley region of 32,000 square miles with a population of 225,000. Activities to date include assistance in the collection of base-line data and in the formulation of long-range health plan for the region. HSI assisted in a feasibility initial planning study for the development of a health maintenance organization; while no definitive approach has been reached, the community is still exploring the possibility of implementing a prepaid comprehensive health plan. A Family Nurse Practitioner program is currently under development to train FNP's for use in a variety of practice situations. HSI staff is working with the State to develop a state-wide plan for emergency health services and will coordinate regional efforts to tie into the projected state plan. Several local agencies have sought the assistance of HSI in developing a mechanism to deliver home health services. Evaluation projects are directed at service impact of the community health clinics and at the evaluation of the nurse practitioner in the clinic settings.

****Experimental Health Services Delivery System (HSH 110-71-258)**

Gary Buck, Ph.D.
Pima Health Systems, Inc.
2302 E. Speedway, Room 214
Tucson, Arizona 85719

6/29/71 - 9/30/75

(\$224,000)

Pima Health Systems, Inc. (PHS), Tucson, Arizona, was incorporated in June 1972. PHS serves all of Pima County, covering 9,241 square miles with a population of 351,000. Immediate priorities of PHS have been focused on the development of a comprehensive data information system. A household survey has been performed with extensive analysis and publication of information. A comprehensive health funds flow study was performed with PHS as a pilot site for the design of this type of study. UHDA data and ambulatory care data are being collected in coordination with a Federal-State-Local Cooperative Data System project. Extensive information on LT facilities and health and welfare agencies has led to the first comprehensive directory of these services in Pima County. PHS data was also used in planning for the implementation of Medicaid in Arizona and in the design of a major health complex in Tucson to replace the county hospital. PHS has performed studies relating to the requirements of the health complex, and other facilities, and for agencies developing new and alternative programs of health care. The Pima County Medical Foundation recently requested PHS to develop its PHSO application for seven counties of southern Arizona. Data from its management information have been used to develop marketing information as part of PHS' extensive support of a consumer controlled successful prepaid health plan in Tucson.

****Study of Canadian Experience with Universal Health Insurance**
(NSM 110-71-278)

Odin W. Anderson, Ph.D.
University of Chicago
Chicago, Ill: ois

6/29/71 - 8/28/75

(\$100,000)

The objective of the contract is to study systematically the Canadian experience with universal health insurance. Special emphasis of the study is on: (1) the accommodation of the medical profession to the universal physician insurance plan; (2) the changes in the relationship between physicians and hospitals; (3) the change in the relationship between the government, physicians and hospitals.

The emphasis will be on physicians' services with hospital services brought into the study in some relationship to the physicians' services. The study will be largely limited to the Province of Ontario. In due course, the experience in Ontario will be related to the larger picture in Canada.

The study should assist in predicting the operational problems associated with the possible establishment of universal health insurance in the United States.

****EXPERIMENTAL HEALTH SERVICES DELIVERY SYSTEMS (NSM 110-72-150)**

Perry A. Scheinok, Ph.D.
Executive Director
Delaware Health Services Authority, Inc.
5 East Reed Street
Dover, Delaware 19901

4/1/72 -- 9/30/74

(No Funding FY 74)
(No Funding FY 75)

The Delaware Health Services Authority was organized and developed under the auspices of the Governor of Delaware to serve as a coordinating body for all programs receiving Federal funds for health and health related functions within the State including health career education. A broadly based thirty member board of directors was appointed by the Governor to serve the Delaware Health Services Authority, Inc. (DHSI), an independent nonprofit corporation established to receive public and private funds. Staffing of the DHSI began on December 1, 1972. DHSI program objectives included development of prepayment health care plans; coordination of academic programs training health care personnel; evaluation of plans for developing a new state supported six-year medical school; development of emergency care programs; and, consumer health education activities to focus on utilization of existing health services. Data system development was coordinated with the Division of Urban Affairs University of Delaware which conducted a statewide household interview survey to define needs and availability and use of existing services.

****Short-Term Training Activities for Personnel in Nursing Homes
(NSN 110-72-154)**

Audrey Saxon Smith
American Nursing Home Association
1025 Connecticut Avenue, N.W., Suite 607
Washington, D.C. 20036

5/26/72 - 10/27/75

(No Funding FY 74)

To provide short-term training courses (at least 36 hours over 3 months) to activities personnel regularly furnishing services to nursing home patients through the development of State planning groups and the preparation of teacher/consultants. There will be approximately 10,000 persons trained who have responsibility for patient activities. In addition, the contract will produce an expanded, revised Activities Supervisor's Guide and a final edition of the Curriculum Guide.

****Short-Term Training for Nursing Home Nurses (NSN 110-72-174)**

Sally Busick
American Nurses Association
2420 Pershing Road
Kansas City, Missouri 64108

6/3/72 - 12/1/74

(No Funding FY 74)

To provide training for at least 3,000 registered nurses currently providing patient care in nursing homes, in aspects of geriatric nursing which will up-grade nursing performance and improve the quality of patient care. Amendments have added: incorporation of the conference curriculum and hand-out materials into a reproducible inservice education manual; and a conference for nursing directors and nursing administrators working in long-term care facilities, which will define the administrative needs and leadership roles and will facilitate the functions of providing patient care; approximately 30 continuing training sessions related to the care of the aged.

****Transfer of Computer Applications in Health Services (HSN 110-72-182)**

William A. Spencer, M.D.
Texas Institute for Rehabilitation and Research
Houston, Texas

6/30/72 - 12/31/74

(\$488,405)

A detailed, on-line computer system was established under Grant HS 088 to meet the information needs of a rehabilitation hospital. This system provides: standardized plans of care for specific chronic illnesses, individualization of standard plans according to the patient's own disability profile, description of the patient's progress, documentation of the chronology of complications, comparison of services planned with those actually rendered, automatic interpretation of certain functional studies, automatic selection of some aspects of treatment, automatic resolution of conflicts in scheduled care plans, and refined estimates of hospitalization costs.

9h

This hospital information system combines in a single system hospital data management relative to patient care monitoring, fiscal and administrative functions and has met the Center's goal of developing a new method of organizing and delivering health services in a rehabilitation setting. However, the transferability of this system to other care settings is being assessed in several actual transfer attempts under this contract.

****Effective Participation of Arizona Chicano Consumers in the Planning and Development of Local Health Programs (HSN 110-72-186)**

Ronnie Lopez
Chicanos Por La Causa, Inc.
Phoenix, Arizona 85034

5/17/72 - 12/16/75

(\$55,000)

The purpose of this contract is to develop an environment conducive to the effective participation of Arizona Chicano consumers in the local planning, development, and implementation of effective and efficient solutions to local health problems.

****The Cost/Effectiveness of Using the Diary as an Instrument for Collecting Health Data in Household Surveys (HSM 110-72-236)**

Seymour Sudman, Ph.D.
Survey Research Laboratory
University of Illinois
Urbana-Champaign, Illinois 61801

6/24/72 - 11/23/74

(\$116,500)

The purpose of this project is to test and determine the utility and cost-effectiveness of using a diary format as an alternative instrument to the personal interview for collecting health information in household surveys. The Contractor is to develop and prepare alternative journal and ledger diaries to obtain basic demographic, and medical information, illness episodes, doctor and hospital visits, and expenditures for medical help. Diary formats, with and without respondent compensation, will be tested against a personal interview instrument of the type commonly used in survey research in the medical field.

This study addresses the NCHS&D goals of costs and quality of health services; recently, the costs of gathering health information by means of the personal interview has become so prohibitive that unless alternative approaches or techniques are found soon, the effectiveness of the household survey may be jeopardized.

****Survey for Federal Employees Health Benefits Program (HSM 110-72-271)**

Samuel Meyers
Bureau of Social Science Research, Inc.
1990 "M" Street, N. W.
Washington, D.C. 20036

6/30/72 - 4/30/75

(No Funding FY 74)

The purpose of this study is to document the nature and magnitude of differences in utilization and expenditures for health services in a prepaid group practice plan and the government-wide service benefit plan of the Federal Employees Health Benefits Program, and to determine the influence of subscriber and provider characteristics on variation in use.

The study will focus on the Washington, D. C., employees and their families who are enrolled in the high-option plans of either Group Health Association or Blue Cross and Blue Shield. Comparisons shall be made of: (1) demographic and associated characteristics, (2) hospital and out-of-hospital medical care delivery and utilization patterns, and (3) patterns of care for episodes of illness of patients with selected diagnoses. The impact of the differences in the benefit structure on medical utilization and expenditures will also be examined.

****Development and Validation of Measurement Scales of Some Key Concepts Used in Health Services Research (HSM 110-72-299)**

John E. Ware, Jr.
Southern Illinois University
School of Medicine
Springfield, Illinois 62708

6/30/72 - 10/31/75

(\$150,000)

The objectives of this contract are as follows:

- (1) Define and develop scales to measure three health concepts: perceived efficacy of care, perceived quality of care and patient evaluation of institutional efficacy;
- (2) In parallel, to complete the development of scales to measure patient satisfaction with health services, perceived health, and perceived value of health;
- (3) Study and demonstrate the reliability and validity of all of the scales and provide manuals for the administration of the instruments.

****Experimental Health Services Delivery Systems (HSM 110-72-301)**

Mr. Edward L. Perrine, Executive Director
Health Development Association
of Northeastern Kentucky
400 Flemingsburg Road
Morehead, Kentucky 40351

6/26/72 - 9/30/75

(\$106,000)

Health Development Association of Northeastern Kentucky (HDA) is representative of fifteen counties in Northeast Kentucky. Twelve counties are in rural Appalachia with its many known health problems. The total population of the region is 228,000. HDA brought together all segments of the community to reach a consensus regarding areas of emphasis for program development activities. A categorization of emergency room facilities has been completed and a comprehensive plan for an emergency medical system is under development. Funds have been received to develop a communications network for five counties that will eventually tie into a regional system. HDA has worked closely with two universities to develop programs for training additional health manpower so greatly needed in the region. Efforts are underway to coordinate and integrate primary health services at the community level and establish linkages to services that can be better provided at the regional level. Areas of priority for program development include emergency medical services, transportation, interinstitutional arrangements, payment mechanisms, manpower development, consumer health education, community based education, and determination of appropriate levels of care.

****Developing a Training Program for Medical Records Clerks
in Nursing Homes (HSM 110-72-302 as amended)**

Virginia Lee
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

6/28/72 -2/28/75

(No Funding FY 74)

To develop a student manual to accompany instructor's manual (developed under previously awarded contract) and to test the manuals in a medical records nursing home situation.

****EXPERIMENTAL HEALTH SERVICES DELIVERY SYSTEMS (HSM 110-72-304)**

Mr. Jack E. McVey, President
Alabama Health Systems Foundation
Central Bank Building, Suite 870
Huntsville, Alabama 35801

6/9/72 -- 9/30/74

(No Funding FY 74)
(No Funding FY 75)

An Experimental Health Services Delivery System (EHSDS) contract was awarded to the Top of Alabama Regional Council of Governments (TARCOG), on June of 1972. The community consisted of five (5) counties in Northern Alabama surrounding the city of Huntsville with a total population of 360,000. Organizational activities for a new community-based corporation were undertaken in the initial contract year. The new corporation developed operational objectives focusing on innovative modifications in the content and use of health services and resources. An early priority was to be the establishment of improved primary health care for the rural areas and the establishment of effective linkages to the providers and resources within the metropolitan area of Huntsville.

****Experimental Health Services Delivery System (HSM 110-72-314)**

James T. McGibony, M.D.
 Jacksonville Experimental Health Delivery Systems, Inc.
 1045 Riverside Avenue
 Jacksonville, Florida 32204

6/26/72 - 9/30/75

(\$373,000)

Jacksonville Experimental Health Delivery Systems, Inc., (JEHDS) was established by a consortium of Jacksonville Health interests including the Consolidated City Department of Health, Welfare, and Bio-Environmental Services, Duval County Medical Society, the local Health Planning Council, the Hospital Council, Hospital Authority, and the Cathedral Foundation for Medical Care. This coalition has been expanded and now included over 70 community organizations and institutions. Data collection activities related to the development of a management information system are strongly supported by an active CHP agency co-located with JEHDS. The implementation of a URDA is being coordinated in area hospitals utilizing the Professional Activities Study/Medical Audit program. A Household Information Survey has been conducted that obtained baseline information on problems of systems access and needs. The data has already been analyzed and the results published (Household Health Survey - Sectional Study). JEHDS is also demonstrating the use of closed circuit television to provide direct physician supervision of paramedical personnel in outlying public health clinics which are being developed as full time ambulatory care centers. Considerable effort has been directed at the evaluation of Jacksonville's Emergency Medical Services system as well as work on Ambulatory care and Vital Statistics Data.

****Experimental Health Services Delivery System (HSM 110-72-323)**

C. Howe Eller, M.D.
 Health Delivery Systems, Inc.
 University Club Building
 607 N. Grand, Suite 525
 St. Louis, Missouri 63103

6/28/72 - 9/30/75

(No Funding FY 74)

Health Delivery System, Inc., (HDS) was organized by a consortium of health interests, both public and private, from the metropolitan St. Louis area and a large rural region in Eastern Missouri. HDS has been expanded to a broad based constituency and functions as a "catalyst" organization to address the development of improved manpower, interinstitutional arrangements, evaluation technology, and procedures, financing, and quality assessment systems necessary for long range health systems improvement for St. Louis and Eastern Missouri. Basic (81 hours) and advance (300 hours) EMT training programs have been developed and implemented. Efforts are underway, in cooperation with the City Health Department and medical schools to improve primary care in underserved areas. A Comprehensive Maternal and Child Health Services Plan has been developed for metropolitan St. Louis. Other developmental efforts include: the establishment of a network linking neighborhood health centers and public hospitals; shared services among NHC's; coordination and integration of several health service programs that previously operated independently.

****Short-Term Training of Nursing Home Personnel (NSN 110-72-333)**

J. E. Moore
The Board of Trustees
University of Alabama
Room 112, Mortimer Hall
1919 7th Avenue South
Birmingham, Alabama 35233

6/23/72 - 3/31/75

(No Funding FY 74)

To provide a comprehensive program of short-term courses to train nursing home personnel. Training courses are multidisciplinary and are developed to meet locally identified needs. Training courses are no less than 6 hours nor more than 30 hours.

****Experimental Health Services Delivery System (NSN 110-72-377)**

Peter J. Levin, Ph.D.
New Haven Health Care, Inc.
1303 Chapel Street
New Haven, Connecticut 06511

6/30/72 - 9/30/75

(\$126,000)

The Experimental Health Services Delivery Systems Contractor is New Haven Health Care, Inc., formed by a consortium of the CHP "b" agency and the local RHP organization. The contractor's Board of Directors is representative of area health organizations and institutions, civic groups, local and state government, and fiscal intermediaries. The project's service area includes New Haven and ten surrounding townships with a total population of approximately 415,000.

Current staff efforts are focused on the rapid development of a management information system to provide corporate management with information on health system status and needs. Numerous studies of the area by prepaid health plans, and regional planning agencies are being incorporated into the data system. Based on this information a community health improvement priority plan will be developed.

****Experimental Health Services Delivery System (HSN 110-72-379)**

William E. Wyatt
Western Health Systems, Inc.
503 1/2 Sixth Street
Rapid City, South Dakota 57701

6/29/71 - 9/30/75

(No Funding FY 74)

Western Health Systems (WHS) is representative of 11 counties in Western South Dakota covering an area of 20,426 square miles and containing a population of 129,509. Operational objectives are being formalized under the direction of a strong management board representative of all sectors of area health interests.

WHS has developed, implemented, and analyzed a household survey and is pursuing efforts to expand the number of hospitals participating in its Uniform Hospital Discharge Abstract system throughout all of South Dakota. WHS is working with the newly emerging PSRO agency in South Dakota to adopt its UHDDS to conform with those of the PSRO's. A long term care abstract system, is being used in every long term care institution in WHS's territory.

****Innovative Approaches to Training Nursing Home Personnel (HSN 110-72-407)**

Robert Brady, Jr.
Robert J. Brady Company
Bowie, Maryland 20715

6/30/72 - 9/2/74

(No Funding FY 74)

To develop self-instructional units to supplement training tools presently available for use in teaching nonprofessional nursing home personnel in areas of nursing care for patients with special problems, in food service, and in environmental maintenance and safety.

****An Evaluation of the Impact of the Implementation and Operation of the Technicon Medical Information Systems at El Camino Hospital (NSN 110-73-331)**

James P. Barrett
Battelle Memorial Institute
Columbus, Ohio

11/27/72 - 6/30/75

(\$220,441)

The purpose of this contract is to evaluate the impact of the installation and operation of a hospital information system in a general community hospital with respect to at least the following five hypotheses: The computer-based hospital information system: (a) induces significant changes in the procedures and organization of hospital management and patient care; (b) is acceptable to staff; (c) increases efficiency, where efficiency is defined as cost per unit of output or the utilization of resources; (d) increases productivity, of hospital staff; and (e) is cost-effective.

****Development of Automated Medical History Questionnaire for Ambulatory Care Program (NSN 110-73-335)**

Herbert Sherman, Ph.D.
Massachusetts Institute of Technology, Lincoln Lab
Lexington, Massachusetts 02173

12/1/72 - 11/30/75

(\$500,000)

The objective of this project is to develop a series of computer administered protocols which will sufficiently support a low level paramedical worker in certain patient care situations, thus enabling the savings of complete physician encounters.

An in-depth survey of automation in ambulatory care by a team of MIT engineers and Harvard physicians has already produced numerous background volumes. A protocol for chronic intermittent care of patients with diabetes and/or hypertension had been developed, and is now undergoing evaluation in several high volume urban settings; protocols for chronic intermittent management of patients with cardiovascular disease, pulmonary disease, and prenatal and well-baby care are in varying stages of development; protocols for management of upper respiratory infections, urinary tract infections, and OB-GYN problems utilizing paramedic interaction for collection and analysis of historical physical examination and laboratory information are currently undergoing development.

****A Study of Physician Attributes and the Diagnosis of Essential Hypertension**
(HSN 110-73-379)

Ernest H. Hammel
University of Michigan
Ann Arbor, Michigan

6/11/73 - 11/30/74

(\$8,796)

This contract provides for an investigation of the factors that determine the adequacy with which physicians diagnose essential hypertension. By means of a questionnaire and interviews the following attributes of physicians will be assessed: educational background, board status, continuing education, type of practice, attitudes toward their practice and patients, knowledge and beliefs about hypertension is diagnosed in their patients. The information will be of great value in planned education and information programs aimed at physicians.

****Development of Training Materials for Reality Orientation** (HSN 110-73-397)

William Alderman
American Hospital Association
840 North Lake Shore Drive
Chicago, Illinois 60611

6/28/73 - 10/31/74

(No Funding FY 74)

To develop and test materials to promote and teach the concepts and techniques of Reality Orientation Therapy to social and health care personnel working with mentally confused patients in institutional settings.

RO is a therapeutic technique designed to help confused persons regain awareness of self and surroundings. This material is directed especially toward use by the various professional and nonprofessional social and health care personnel working with confused elderly.

The materials developed will consist of a training guide, a slide presentation and training curriculums. The materials developed will be tested through two prototype training seminars in Region V. This contract is jointly funded with HSN.

****Computer-Based Paramedic Support and Audit (HSM 110-73-403)**

Richard Toppkins, M.D.
Dartmouth College
PHOSIS Laboratory
Hanover, New Hampshire

7/1/73 - 6/29/75

(\$300,000)

The objective of this contract is to initiate the phased development, testing and validation of a medical support system for paramedical personnel based on a specific set of clinical protocols. During the first phase evaluation protocols will be designed and implemented to provide data on the cost, medical validity and utility of a paper based system. Phase II will involve a combination of further evaluation to include the development and testing of criteria for assessing the performance of physicians' assistants with the extension of the audit process to involve the creation of a minimal record system requiring computer support.

****Continuing Education in Restorative Long-Term Care for Nursing Personnel (HSM 110-73-405)**

Barbara E. Tuck
Washington State Health Facilities
Education and Research Foundation
1818 Westlake Avenue
Seattle, Washington 98109

6/25/73 - 12/31/74

(No Funding FY 74)

To provide continuing education in restorative care for 720 nursing personnel in six geographic areas of Washington State to upgrade practice and to improve the quality of patient care. Content examinations measuring knowledge gained and changes in job performance will be given to all participants. The classroom instruction will be conducted in community colleges and will lead to either college credit or certification, as appropriate.

****National Social Work Training Program to Meet Human and Social Needs
(NSN 110-73-408)**

Braxton Warner
National Association of Social Workers
1425 M Street, N.W., Suite 600
Washington, D.C. 20005

6/29/73 - 3/30/75

(No Funding FY 74)

To train social work designees and consultants employed in long-term care facilities. As a result, they will be able to provide appropriate social services to reduce the unmet social and human needs of patients and their families. A two-phase approach will be used whereby Helen Gossett's Curriculum for Social Work Personnel in Long-Term Care Facilities will be used to train trainees in Phase I. These trainees will then be used in Phase II to train others.

****Training Directors of Inservice Training and Nurses' Aides in SNFs
in Southern California (NSN 110-73-409)**

Trudy Butts
California Association of Health Facilities, Inc.
5225 Wilshire Boulevard
Los Angeles, California 90043

6/25/73 - 12/31/74

(No Funding FY 74)

To provide instruction to the registered nurse responsible for inservice training in each of 200 SNFs licensed in Southern California in the development and implementation of an effective inservice training program. Utilizing the principles and materials developed in this program, these nurses should be able to conduct a minimum of 8 hours a month for at least 6 months of inservice training for approximately 6,000 nurses' aides.

****Inservice Training Project for Nurses' Aides in ICFs (HSH 110-73-410)**

Robert Kane
University of Utah
Department of Community and Family Medicine
50 North Medical Drive
Salt Lake City, Utah 84112

6/26/73 - 9/30/74

(\$500.00)

To improve the provision of care in the licensed ICFs in Utah by providing 2 hours of training every other week (52 hours) to a minimum of 30 nurses aides in the "progress benchmark" technique of observation and record-keeping.

****Inservice Training Program for Nurses' Aides and Food-Handling Personnel in SNFs in Mississippi (HSH 110-73-411)**

Arthur L. Higbee
Mississippi Nursing Home Association
P. O. Box 16186
Jackson, Mississippi 39206

6/27/73 - 12/31/74

(No Funding FY 74)

To train 200 nurses' aides and 60 food-handling personnel employed in SNFs in Mississippi. The districts of the State-supported junior colleges will be grouped to provide seven training sites.

****Pharmacy Training for Nursing Homes (HSA 110-73-421)**

Samuel Kalman
American Pharmaceutical Association
2215 Constitution Avenue, N.W.
Washington, D. C. 20037

6/27/73 - 12/31/74

(No Funding FY 74)

To expand the quality and scope of training offered by State and local pharmaceutical associations and schools of pharmacy throughout the country to personnel involved in pharmacy services in nursing homes, and to offer a curriculum to schools of pharmacy so that they may provide similar training to student pharmacists.

****Nationwide Long-Term Care Education System (HSA 110-73-425)**

Charlotte Hamill
Robert C. Oliver
Burke Rehabilitation Center
785 Samaroneck Avenue
White Plains, New York 10605

6/29/73 - 6/30/75

(No Funding FY 74)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Nationwide Long-Term Care Education System (NSH 110-73-428)**

Leonard Gottesman
Philadelphia Geriatric Center
5301 Old York Road
Philadelphia, Pennsylvania 19141

6/27/73 - 6/30/75

(\$57,000)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Nationwide Long-Term Care Education System (NSH 110-73-432)**

Lester H. Barron
Garden Crest Convalescent Hospital
909 Lucile Avenue
Los Angeles, California 90026

6/29/73 - 6/30/75

(\$60,000)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Bibliography of Research Results of Projects Supported by NCHSRD
1968 - 1973** (NSN 110-73-454)

Alec Peters
Franklin Institute Research Laboratories
Benjamin Franklin Parkway
Philadelphia, Pennsylvania 19103

6/30/73 - 8/31/74

(\$15,353)

The objectives of this study are (1) to compile a bibliography of published material, arranged by various indices, resulting from grants and contracts supported by NCHSR and its predecessor NCHSRD from 1968 through 1973 and (2) to develop and implement a methodology for obtaining information on means other than publications used by these investigators to disseminate their research findings. This study involves a survey of approximately 650 investigators supported via 419 grants and 291 contracts.

****Short-Term Training for LPNs and LVNs Currently Employed in**
(NSN 110-73-457)

Shirley Sharan
National League for Nursing, Inc.
Ten Columbus Circle
New York, New York 10019

6/26/73 - 12/31/74

(No Funding FY 74)

To provide, in each of 25 States, training under a prescribed curriculum to improve the performance of approximately 1,250 LPNs or LVNs currently providing services to patients in licensed nursing homes and to produce course outlines with accompanying instructional guides that can be used for follow-up continuing education. (Representation will be from all 50 States).

****Development of Community Funds Flow Data -
Phase II (NSH 110-73-463)**

David Hodgson, Ph.D.
Arthur Young and Company
1025 Connecticut Avenue, N.W.
Washington, D.C. 20036

6/27/73 - 12/26/75

(\$44,5000)

The purpose of this contract is to refine and extend work on a community-based financial information system which will assist planners and decision-makers in monitoring the performance of the community health system and in measuring the allocation of financial resources within the community. A first phase of this project, to develop aggregate descriptive data by source and use of funds, was completed in September 1973.

This phase of the project will be devoted to the development of more detailed and specific financial information in two test communities: Binghamton, New York and Tucson, Arizona.

A major thrust of the project is to develop an appropriate framework for analysis, including the measurement of the impact of changes over time, measurement of service and program costs and development of linkages with other health services and related data.

****Assistance in Conference Administration Procedures (NSH 110-73-466)**

Robert Gee
Optimum Computer Systems, INC.
135 Madison Avenue
New York, New York 10016

6/30/73 - 8/30/75

(\$877,807)

The purpose of this contract is to obtain the services of the scientific community, by means of conferences which will assist the NCHSR in the pursuit of its activities toward a research mission in health services organization, delivery and financing. To this end, the contractor works closely with responsible National Center staff in assuring that the planning and conduct of such conferences are handled in the most responsive manner possible.

****Impact of Economic Stabilization Program on Hospitals and Hospital Care**
(HSH 110-73-467)

Paul B. Ginsburg, Ph.D.
Michigan State University
East Lansing, Michigan

6/30/73 - 6/30/75

(\$20,019)

The contract will support an analysis of the impact of the Economic Stabilization Program (ESP) on hospitals and hospital care in the United States. Specific concern is with an econometric analysis of the effects of ESP on price induced revenue changes, costs of services, labor and non-labor costs, quantities and mix of services, and case mix. ESP has potential of having a profound effect on these variables and, consequently, on the costs, quality and access to hospital care.

The analysis called for in this contract should be an important tool for decision-makers contemplating adoption, alteration, or termination of regulations affecting hospitals. Analysis of the reactions of hospitals to the limitations imposed by ESP will make an important contribution to the general study of hospital behavior.

****Exporting the Illinois Automated System for Long-Term Care**
to Other States (HSH 110-73-499)

Donald St. John
Illinois Department of Public Health
Long-Term Care Section
1130 South 6th Street
Springfield, Illinois 62704

6/30/73 - 3/31/76

(\$597,243)

Illinois has developed an automated management information system for use in licensure and certification of long-term care facilities and medical review of patients under Medicaid and State welfare programs. The objective of this contract is twofold: (1) Provide the means to the State of Illinois Department of Public Health to assess, select, and plan for implementation of improvements to the Illinois System which will enhance its exportability to other States; and (2) provide technical assistance to other States in the preparation of plans, specifications, and cost estimates for adaptation and implementing the Illinois System, including recommended improvements.

An additional component of this project will expand the quality evaluation system from Contract HSH 110-72-400 into a dynamic monitoring system, incorporate this system into the current ongoing Illinois Automated Information System, test the validity and usefulness of the dynamic monitoring system in a regulatory mode in 100 long-term care facilities in Illinois, and develop a quality system module appropriate for exportation with the current Illinois System as well as appropriate for use with other systems.

****Nursing Home Simulation Model Completion and Validation (HSM 110-73-501)**

Donald B. St. John
 Illinois Dept. of Public Health
 Springfield, Illinois

6/28/73 - 10/27/74

(\$14,468)

The purpose of this contract is to complete and validate a nursing home simulation model. This will include collection and analysis of additional input data on frequency of nursing activities and activities performance times.

The complete model will be validated to test the generality of the simulation model in a series of nursing homes that differ with respect to size, type of ownership and location. Information shall be collected from two homes in each category of non-profit, profit, and hospital-operated nursing homes. Homes will be selected to include medium (50-100 beds) and large (100-150 beds) homes in each category.

The conduct of the study shall include: 1) selection of nursing homes, 2) collection of data, 3) data processing and analysis, 4) model modification and 5) model validation.

****Nationwide Long-Term Care Education System (HSM 110-73-508)**

David Kramish, M.D.
 Beth Israel Hospital and Geriatric Center
 1601 Lowell Boulevard
 Denver, Colorado 80204

6/29/73 - 6/30/75

(\$52,750)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Incentives and Decisions Underlying Hospital's Adoption and Utilization of Major Capital Equipment (HSM 110-73-513)**

Jerry L. Crowmwell
ABT Associates, Inc.
Cambridge, Massachusetts

6/29/73 - 12/28/74

(No Funding FY 74)

The objective of this contract is to answer a number of questions about hospitals purchases of major capital equipment. What kinds of capital equipment are purchased by various types of hospitals; who are the effective decision makers in the hospital; what role do anticipated productivity increases play in decisions to purchase; where are certain types of equipment first introduced, and how rapidly do they spread to other hospitals, etc? Models of capital equipment purchase and diffusion are to be developed, and appropriate hypotheses to be derived. Data on no more than ten well-defined pieces of equipment will be collected from a sample of hospitals in a single geographic area.

****Feasibility of Developing a Data Archive for the NCHSRD (HSM 110-73-517)**

Jay H. Glasser, Ph.D.
University of Texas
Houston, Texas

6/29/73 - 9/30/74

(No Funding FY 74)

This contract has as its purpose the determination of the feasibility of establishing a data archive from data sources which have resulted from research activities funded by the National Center for Health Services and Development.

Considerable sums of money have been spent on gathering data in research funded by the NCHSRD. In many instances, this data has not been available for secondary analyses and for validation of conclusions. A data archive may provide a means to 1) promote understanding and collaboration among researchers; 2) increase the research potential of a given investment in data gathering; 3) reduce duplication in research and promote instrument development; 4) improve research designs and 5) provide data valuable for policy research.

****Nationwide Long-Term Care Education System (NSH 110-73-518)**

Raymond J. Dunn
New England Rehabilitation Center
#1 Rehabilitation Way
Woburn, Massachusetts 01801

6/28/73 - 6/30/75

(\$65,600)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Provisional Guidelines for Periodic Screening, Diagnosis, and Referral of Individuals Under the Age of 21 (NSH 110-73-524)**

Richard Olmsted, M.D.
American Academy of Pediatrics
Evanston, Illinois

6/28/73 - 11/27/74

(\$44,000)

The purpose of this contract is to provide necessary support to the American Academy of Pediatrics to develop provisional guidelines for a program of periodic screening, diagnoses, and treatment and health maintenance of individuals under the age of 21.

These provisional guidelines will include such areas as: patient scheduling, registration, testing to be done, test reporting, laboratory test, referral, followup and other areas as indicated. What screening tests should be performed, what would go into health assessment, who should perform, how should referral be made into appropriate delivery system.

****Evaluation of HECRO Program (NSN 110-73-526)**

Barry Decker, N.D.
Arthur D. Little, Inc.
Acorn Park
Cambridge, Massachusetts 02140

6/30/73 - 6/30/75

(\$292,279)

The study is to assess the performance of all HECRO projects funded by NSN with regard to: (1) the objectives of the program and (2) the specific objectives of each HECRO grant.

****Nationwide Long-Term Care Education System (NSN 110-73-531)**

James C. Wilson
Presbyterian Village
550 East Ann Arbor
Dallas, Texas 75216

6/29/73 - 6/30/75

(\$40,350)

The original contract was to establish, regionally, a Long-Term Care Education Center to train multidisciplinary teams from long-term care facilities to improve the quality of care in these facilities within the geographic area. Focus is on apprentice approach of combined on-the-job and didactic training.

This amendment is to provide for additional work to develop and implement six new courses, refine the current evaluation plan and develop instruments which will evaluate the effectiveness of the 3-week training program, expand the number of specialty seminars, and establish a program to train educational designees to organize inservice training programs for nursing home personnel in their own communities.

A consulting service for participating long-term care facilities allows for reinforcement of learning. An evaluation program is included, as are plans for continuation of training through local funding.

****Continuing Education on Social Components in Long-Term Care Facilities** (HSA 110-73-538)

B. Ted Olson
American Association of Homes for the Aged
373 National Press Building
14 and F Streets, N. W.
Washington, D. C. 20004

6/30/73 - 11/1/74

(No Funding FY 74)

To design, develop, implement and field test six prototype educational institutes focusing on the scope and quality of the social component of services rendered in nursing homes for the aged, and related facilities and to establish techniques for both quantifying and evaluating the effectiveness of such programs.

****Impact Evaluation of EMS Projects** (HSA 106-74-1)

John Ward
Geomet, Inc.
50 Monroe Street
Pockville, Maryland 10850

2/7/74 - 2/7/76

(\$196,435)

The five HSNHA-funded Emergency Medical Services demonstration sites are in the process of developing their own project-level evaluation plans. These five small evaluation plans will input data into the overall program evaluation. This program evaluation will provide data on the EMS program necessary for system design and planning. The evaluation protocol consists of two major analyses; (1) the identification and analysis of EMS system characteristics which show a significant relationship to patient outcome and (2) cost analysis to define means of allocating a limited amount of resources to the system characteristics found significant to patient outcome to maximize improvement of patient outcome. From the results of these two phases of evaluation, a resource allocation model for the EMS system will be developed. A pretest of the evaluation protocol will be conducted.

****Determination of Planning Methodology Appropriateness for CHF Utility**
(HRA 106-74-11)

Harry S. Balet, Jr.
Analytic Services, Inc.
5313 Leesburg Pike
Falls Church, Virginia 22041

2/21/74 - 10/10/74

(899,975)

The primary purpose of this project is to review, evaluate, and abstract past products of ECHEC-supported research in order to identify products which are applicable to, and have utility for, Comprehensive Health Planning Agencies (CHPAs), and to produce a special manual of abstracts for CHPAs. A secondary purpose is to identify research needed to provide aids to CHPAs that are not provided by past ECHEC-sponsored products.

The problems which created the need for this project are: (1) the urgent need of CHPAs for information and techniques which can assist them in carrying out their functions; and (2) the absence of any ready reference to the applicable information and techniques which have been generated by research sponsored by the National Center for Health Services Research.

****Health Services Technology Bibliographic Service** (HRA 106-74-21)

Gene Viscio
National Institute for Community Development
Washington, D.C.

6/22/74 - 6/21/75

(8113,432)

The purpose of this contract is to provide problem specific information research services to the Division of Health Care Information Systems and Technology. These support services will consist of reviews of the state of knowledge in specific health care delivery problem areas. The reviews should emphasize current operational experience and research (including development, analysis, and experimentation) relevant to program priorities as established by the Division.

****Analysis of Data from the National Survey--Trends in Health Services Utilization and Expenditures as a Basis for Social Policy Formulation**
(HRA 106-74-24)

Ronald Anderson, Ph.D.
Center for Health Administration Studies
University of Chicago
5726 Woodlawn Avenue
Chicago, Illinois 60637

6/23/74 - 6/24/76

(\$197,280)

This contract provides for a series of analyses of methodological and substantive policy questions that arose during the implementation of a national household survey on the utilization and expenditures for health services, which Dr. Anderson undertook through support of contract HRA 110-70-392. This contract specifically includes analyses of methods of organizing, managing, and implementing a replication of the study; the accuracy and validity of estimating algorithms; the verification process; social, economic and health correlates of reliability and validity in survey reporting; comparison of persons who signed permission forms with those who did not; differential biases in estimates of utilization and expenditures; and those individuals who unwilling or unable to pay bills for health care services.

****Hospital Cost Analysis: Implications for COLC Hospital Regulations**
(HRA 106-74-45)

Lester Lave, Ph.D.
Graduate School of Industrial Administration
Carnegie-Mellon University
Pittsburgh, Pennsylvania 15213

6/24/74 - 8/23/74

(\$15,000)

This contract research will provide a detailed analysis of short-term variations in hospital costs per case. Empirical estimates of hospital marginal costs which are specific to U.S. census region and sensitive to changes and occupancy rates and insurance coverage will be obtained. The results should allow greater refinement and specificity of hospital cost containment policy.

****Preliminary Analysis of Patterns of Hospital Use and Cost**
(HRA 106-74-47)

Roland J. Loup, Ph.D.
Commission on Professional and Hospital Activities
1968 Green Road
Ann Arbor, Michigan

6/29/74 - 12/28/74 (850,630)

The contract will assemble a data file on hospital use and related variables. Data will be for approximately 150 PHS hospitals and will include utilization by diagnosis in the form of index numbers merged with selected socio-economic data. The data, in the form of several correlation matrices, will serve as a basis for further research on the nature and behavior of utilization patterns of U.S. short-term general hospitals.

****Design of a Methodology to Conduct a Study of Chronic Illness
Among the Poor** (HRA 106-74-50)

Jack Hoshman
Hoshman Association, Inc.
Washington, D. C.

6/20/74 - 3/19/75 (872,777)

The objective of this study is to design and develop a methodology to conduct a study of the epidemiology, treatment, and concomitant cost of chronic illness among the poor in the United States.

The results of this study are expected to yield alternative designs of the study of chronic illness among the poor in the United States defining such items as the objectives, methodologies to be used, data sources, chronic conditions to be considered, budget and etc.

Formulation of a national health policy must be based on sound empirical evidence. Thus it is important to learn whether or not there are difference between the poor and the general population in terms of incidence, death disability and utilization of health care resources due to chronic illness. The utilization of an efficient study design would result in savings to the Government, the acquisition of pertinent information, and possibly earlier availability of results.

****LASC Longitudinal Study of Medical Students of the Class of 1960**
(HRA 106-74-52)

Ayres G. D'Costa, Ph.D.
Association of American Medical Colleges
One Dupont Circle, N.W.
Washington, D. C. 20036

6/20/74 - 1/19/75

(\$41,654)

The objective is to measure performance of physicians included in this cohort and to determine relationships or predictor variables between their characteristics in medical school and their performance, career choices, geographic distribution and type of practice. The goal is to establish criteria for use by admissions committee which could alter selection of student to improve the quality of their care in practice and to improve accessibility (distribution) of medical care.

Beginning in 1956, using a stratified sample (geographically and public-private) of 28 medical schools and 2800 freshman students, data was collected primarily concerning psychological variables during their four years in school. Complete data from all instruments are present on 1600 students. (When the ASA performed a survey in 1971, they were able to locate 2400 of the original 2800, still in active practice in the U. S.)

****Technical assistance to the Experimental Health Services Delivery Systems** (HRA 106-74-53)

H. Denman Scott, M.D.
Rhode Island Health Services Research, Inc.
56 Pine Street
Providence, Rhode Island 02903

6/28/74 - 6/28/75

(\$96,886)

This project is one of three which will provide technical assistance in data systems development to selected Experimental Health Services Delivery Systems (EHSDS) projects. Primary emphasis of this assistance will be to develop capabilities of the projects to use and analyze previously-collected data in the development of priorities and for community planning and decision-making. The contractor has developed a comprehensive health services data system for the State of Rhode Island and will be drawing upon this experience to improve the data activities in the selected sites.

****Impact of State Certificate of Need Laws on Health Care Cost
and Utilization (HRA 106-74-57)**

Thomas W. Rice, Ph.D.
Johns Hopkins University
Charles and 34th Streets
Baltimore, Maryland 21218

6/25/74 - 6/24/75

(884,112)

The objectives of this contract are: (1) to obtain a methodology for measuring the impact of State certificate of need laws on the costs, utilization, and distribution of health care services, and (2) to secure a report that analyzes the effect of State certificate of need laws on the costs, utilization, and distribution of services delivered by health care institutions in a selected sample of geographical areas. Comparisons will be made involving health care institutions operating under State certificate of need authority with those that do not function under such authority.

****Evaluation of Feder Physicians Assistants - HEDHI - Utah (HRA 106-74-58)**

Charles W. Castle, M.D.
University of Utah College of Medicine
Department of Community and Family Medicine
50 North Medical Drive
Salt Lake City, Utah 84132

6/29/74 - 5/31/75

(3138,192)

Since FY 1970, National Center has supported the development and evaluation of HEDHI projects, serving as primary care physician assistant models, at six sites. WCHSBD initiated evaluation studies of Feder trainees and graduates in fiscal year 1973; these studies provide basis for further study. The current evaluation strategy is aimed at obtaining needed measurement of the HEDHI program's impact on primary care. This evaluation study is designed to measure the impact of the HEDHI program on primary health care service in terms of access, productivity, cost, and quality of medical care. At present, three HEDHI projects have ongoing evaluation protocols which permit assessment of quality of care, access to care and the productivity or preceptor practices. Quasi-experienced, controlled studies will be instituted at each of these sites, utilizing data collection instruments which have already been developed. Previous evaluation efforts, supported primarily by WCHSBD developmental grants, are nearing completion in most instances. These studies will provide the basis upon which HEDHI impact studies are to be conducted.

****1 Study of Emergency Medical Services in Neighborhood Health Centers** (HRA 106-74-65)

Lois C. Gray, Ph.D.
National Association of Neighborhood Health Centers, Inc.
1625 "I" Street, N. W.
Washington, D.C. 20036

6/29/74 - 6/28/75

(\$145,000)

To develop a methodology to investigate and describe the availability and utilization of emergency medical services in federally supported neighborhood health centers. This information is pertinent to the assessment of the impact of EHC emergency services on target populations being served and to make an assessment of EHC emergency medical services role in the overall spectrum of health and medical care.

****Followup Health Surveys for Evaluating Neighborhood Health Centers** (HRA 106-74-66)

Tom McKenna
Westat Inc.
11600 Nebel Street
Rockville, Maryland 20852

6/30/74 - 8/31/75

(\$445,271)

It has been about 5 or 6 years since the Neighborhood Health Center (NHC) projects were established. The initial evaluation agenda included plans to conduct baseline and followup health surveys to measure program impact. So far, identical baseline surveys have been conducted in a number of NHC service areas during the period between 1968 and 1971. The issue for policy is to assess how these new delivery systems may have influenced utilization patterns, care of persons with chronic conditions, and what impact they may have had on hospital and disability days. Followup household interviews will be conducted by a qualified survey organization, using a standard area probability sampling technique. There are inherent problems in relating two cross-sectional surveys 5-6 years apart, but by use of major control variables and "control" groups (users of other providers), it is expected that the effect of NHC projects on health behavior in the area can be described.

****A Study of State Policies Allowing Foreign Medical Graduates**
(HRA 106-74-68)

Irene Butter, M.D.
School of Public Health
University of Michigan
109 Observatory
Ann Arbor, Michigan 48104

6/24/74 - 6/23/75

(\$129,550)

The purpose of the funded study is to determine what legal methods exist in the states to enable foreign medical graduates to practice medicine and the policies under which state licensing boards act in allowing that practice. In particular, the study will seek to determine the manner in which states grant temporary or "limited" licensure to graduates of foreign medical schools who have not completed requirements for full licensure. The study method involves a three-step literature review, survey, and interview technique, and will involve sampling of the total universe of FMGs. Its greater force, however, may well be on utilization of these medical personnel and their impact on patient care, both of which are current major concerns of organized medicine, legislatures, and a number of researchers.

****Dial Access Health Information System** (HRA 106-74-70)

Raymond K. Saar
Tel-Med, Inc.
666 Fairway Drive
San Bernardino, California 95408

6/24/74 - 6/23/75

(\$123,016)

This contract is to support expansion and evaluation of a telephone-access recorded health information system serving both inpatients and the general public in the San Bernardino, California area. A sub-contracted activity will produce an evaluation plan for both hospital and general public-based programs, aims at assessing the impact of this information system in terms of patient/public attitudes, provider attitudes and changes in patterns of health services utilization. It is expected that the major contribution of this system will be to relieve the burden of too few health care providers and encourage more efficient health services utilization through health education.

****Training Long-Term Care Facility Nurse Aides in Rural Areas**
(HRA 106-74-71)

Burleigh Lovett
University of Maine at Orono
Orono, Maine 04473

6/28/74 - 6/27/75 (329,352)

To provide appropriate training to nurse aides employed in long-term care facilities in the rural areas of Maine in conjunction with the testing of a curriculum for a basic course in nurse aide training.

****Short-Term Training for Nursing Home Dietitians and Supervisors of Dietetic Services**
(HRA 106-74-72)

Mary J. Sinnema
American Dietetic Association
620 North Michigan Avenue
Chicago, Illinois 60611

6/25/74 - 6/24/76 (\$214,437)

To conduct short-term training for dietitians and nonprofessional supervisors of dietetic services throughout the country. All trainees will be employed in nursing homes or other long-term care facilities. Sites for training will be in five regions and 20 States. An advisory committee will advise on curriculum formation.

Based upon content information in the training courses, the contractor will also develop two self-study courses; one for dietitians and the other for nonprofessional dietetic assistants working in long-term care facilities. Self-study courses will be offered to members of the American Dietetic Association and the Hospital, Institution, and Education Food Service Society and others.

****Development of a Multimedia Resource Center (HRA 106-74-73)**

William Creager
Capital Systems Group, Inc.
6110 Executive Boulevard
Suite 850
Rockville, Maryland 20852

6/26/74 - 4/25/75

(\$28,080)

To provide a media center that will serve as a source of published material, audio-visual aids, training curricula, and research documents related to gerontology as well as to the health, environmental and psychosocial aspects of long-term care. This center will be for the use of contractors, students, researchers and others.

****Development of a Sickness Impact Profile**

(HRA 106-74-74)

Marilyn Bergner, Ph.D.
University of Washington
Seattle, Washington

6/27/74 - 2/26/75

(\$116,403)

The contractor shall furnish all necessary facilities, supplies and materials to perform a critical analysis of data collected in pretesting of the Sickness Impact Profile. This data analysis shall measure the internal validity of questions contained in the survey instrument and will be used to make final modifications to the Sickness Impact Profile prior to large-scale field trials. Using the pretest data, the contractor will determine the reasons for refusal of interviews and the reasons for failure of some patients to complete the survey. The acceptability of the survey instrument to the providers of services will also be determined during the performance of this contract.

****Training Long-Term Care Facility Nurse Aides in Rural Areas**
(HRA 106-74-76)

Donald L. Erickson
Wyoming Health Training Network, Inc.
3100 Henderson Drive
Cheyenne, Wyoming 82001

6/25/74 - 6/24/75

(830,275)

To provide appropriate training to nurse aides employed in long-term care facilities in the rural areas of Wyoming.

****Training Long-Term Care Facility Nurse Aides in Rural Areas**
(HRA 106-74-113)

Wayne Tanner
Weber State College
3750 Harrison Boulevard
Ogden, Utah 84403

6/27/74 - 6/26/75

(872,674)

To provide appropriate training to nurse aides employed in long-term care facilities in the rural areas of Utah.

****Design of an Evaluation of Training Programs for Staff of Long-Term Care Institutions (HRA 106-74-115)**

Marie Fogarty
J-Squared, B-Squared Consultants, Inc.
106 West 40th Place
Los Angeles, California 90037

6/30/74 - 9/30/75

(\$143,265)

The objectives of the study are to determine the effectiveness and efficiency of the various types of short term training of personnel providing services and care in long term care facilities and to recommend the most appropriate educational strategies and methodologies to improve skills, attitudes, and performance of long term care provider personnel. The educational efforts to be evaluated include: (1) programs contracted for by Universities, Facility Organizations, State Health Departments; (2) programs contracted for by national organizations such as ANA, National League for Nursing, etc.; and (3) programs contracted for known as the Regional Long Term Care Training Centers.

****Review and Analysis of Employee Incentives in Health Care Institutions (HRA 106-74-116)**

Eugene T. Austin
Roy Littlejohn Associates, Inc.
1335 Green Court, N. W.
Washington, D.C. 20005

6/30/74 - 7/29/75

(\$172,814)

The contractor will review, describe and analyze employee incentive programs which are designed to increase employee productivity in hospitals and nursing homes; review and describe such programs as exist in private industry, particularly with respect to their applicability to health institutions; and, based on the results of these investigations, prepare recommendations as to the types of incentive programs which are effective and could be implemented in additional institutions. The results of this project will be helpful in improving efficiency and containing costs.

****Training Long-Term Care Facility Nurse Aides in Rural Areas**
(HRA 106-74-117)

Wayne Whatley
Texas Nursing Home Association
6225 Highway 290 East
Austin, Texas 78723

6/26/74 - 6/25/75 (872,627)

To provide appropriate training to nurse aides in long-term care facilities in the rural areas of Texas.

****Analysis of Existing Ambulatory Automated Record System (HRA 106-74-118)**

Ronald Henley, Ph.D.
University of California
San Francisco, California

6/27/74 - 6/26/75 (\$119,347)

The work performed under this contract will be an analysis of the state-of-the-art of ambulatory automated medical record systems. The results of the analysis will serve as a preliminary document for comparisons between systems. Such factors as developmental costs, operating costs, personnel required for operations, record contents and format hardware and software requirements, methods of manipulating data, retrieval techniques, health care impact and management utilization will be examined.

****Analysis of Group Practice Efficiency (HRA 106-74-119)**

George Carcagno
Mathematica, Inc.
P.O. Box 2392
Princeton, New Jersey 08540

6/29/74 - 12/28/75

(\$452,500)

The objectives of this study are to determine how both the internal incentives and organization of group practices, and the interaction of a group with its market environment affect four key parameters of group practice performance: (1) the costs of providing care, (2) prices charged to consumers, (3) supply of physician labor, and (4) physician productivity. Particular emphasis will be focused upon effects of alternative cost sharing schemes, physician reimbursement plans, patient payment mode, business manager activities, and ownership of hospital facilities. Control variables will include group size and specialty composition.

The data for this study will be collected by means of on-site interviews at approximately 1000 group practices. This represents a stratified random sample drawn from the universe of all group practices. Standard multivariate statistical procedures will be employed. The empirical analysis will be guided by the theories of medical care production activity and professional behavior within groups.

****Evaluation of New Demonstration Projects in Child Abuse and/or Neglect (HRA 106-74-120)**

Frederick C. Collignon, Ph.D.
Berkeley Planning Associates
2320 Channing Way
Berkeley, California 94704

6/26/74 - 6/26/75

(\$194,509)

Eleven new projects to integrate and coordinate community services for the treatment of child abuse/neglect are being funded by SES/OCE. The objectives of the contract are to perform both formative and summative evaluation of new demonstration projects in child abuse and neglect. The three-year evaluation shall employ time series analysis including a baseline period prior to the initiation of the demonstration grants. The formative (process) evaluation of the various projects is for the purpose of: (1) providing information to the specific demonstration project grantees during the full duration of the grant in terms that will allow the grantee to monitor his own progress and revise activities where necessary so that the grantee will continually progress toward the stated objectives; (2) providing information to the respective funding agencies to allow for appropriate monitoring of the various projects. The summative (or outcome) evaluation is for the purpose of measuring the differential impact of the demonstration projects on the communities they serve. Those sites which are similar enough to allow cross-site uniform data collection and analysis will be identified and treated for comparative purposes.

****Conditions Under Which Corrections can be Made Which Will Give
Unbiased Estimates of the Effects of Emergency Health Services Variables
(HRA 106-74-122)**

James W. Bush, M.D.
California University of San Diego
La Jolla, California

6/28/74 - 8/27/76

(866,758)

The purpose of the contract is to determine those conditions and correction procedures which will reduce bias in the research conclusions on the effects of emergency medical services.

This study is expected to simulate variables which will provide a basis for designing unbiased studies in emergency medical situations. These studies are intended to supply useful information to specify those variables on which to estimate the effects on health.

****Training of Medical Record Personnel Working in Nursing Homes
(HRA 106-74-124)**

Margaret C. Beard
American Medical Record Association
875 North Michigan Avenue
Suite 1850
Chicago, Illinois 60611

6/28/74 - 6/27/75

(899,150)

To provide, under joint auspices with State medical record associations, a training experience using the multidisciplinary approach for medical record consultants who work in or with Skilled Nursing Facilities (at the administrator or technician level), nursing home administrators, directors of nurses, and surveyors from State licensing agencies and from the Joint Commission of Accreditation of Hospitals to thoroughly illustrate the good medical record systems in Skilled Nursing Facilities, to make them recognizable to all professional groups represented and to prepare the medical record consultants (the primary target group) to train medical record clerks to follow systems designed by the consultants.

****Analysis of 1974 State Health NP Licensure Legislation (HRA 106-74-125)**

Gerald Seifert
Aspen System Corporation
11600 Bebel Street
Rockville, Maryland 20852

6/28/74 - 2/27/75

(\$46,214)

The purpose of this contract is to analyze 1974 State legislative bills and laws dealing with health manpower credentialing. This analysis will be conducted to determine trends and innovative approaches pertaining to continuing education requirements, career advancement, reciprocity, disciplinary procedures, and other aspects of health manpower licensure.

****A Comprehensive Community Approach to Nursing Home Care (HRA 106-74-126)**

B. E. Fountain
Health Facility Resources, Inc.
LaSalle Building
1028 Connecticut Avenue, N.W.
Washington, D. C. 20036

6/30/74 - 6/29/75

(\$124,948)

The purposes of the contract are: (1) to develop in a selected community through collaboration of nursing homes, medical care facilities, and services, health and social service agencies and programs, a realistic community plan which will enable nursing homes to utilize community resources in order to meet the needs of in-patients or to plan for a patient's return to community living without interruption of his continuing care needs; and (2) to carefully document the processes of planning, organizing and implementing the program to provide a foundation for future development and testing in other communities.

****Evaluation of Health Planning Methodologies (HRA 106-74-133)**

Gary C. Byrne, Ph.D.
The Orland Corporation
8630 Fenton Street
Silver Spring, Maryland 20910

6/30/74 - 6/30/75

(\$256,082)

The purpose of this contract is to describe and evaluate the process, product and impact of the planning and evaluation techniques used by CDP's HSP's and HSDS for possible use by proposed regional health authorities. More specifically, the objectives are to identify, describe, and assess those planning and evaluation techniques, processes, data bases, and approaches devised and/or employed by Regional Medical Programs, Comprehensive Health Planning Agencies, and Experimental Health Services Delivery Systems that have been relatively successful and useful in achieving agreement and reaching decisions leading to action and implementation, and which appear to have relevance for health planning efforts generally now, and in the immediate future.

****A Preliminary Analysis of the Effects of Categorization of Hospital Emergency Departments on Hospitals' Utilization Patterns, Finances, and Community (HRA 106-74-134)**

Rudolph Marchese
Bascosh Associates, Inc.
7961 Eastern Avenue
Silver Spring, Maryland 10910

6/30/74 - 3/3/75

(\$74,901)

The purpose of this project is to make a preliminary determination of the current state of development of categorization of hospital emergency departments as well as to conduct an assessment of the kinds of measures (and their availability) which are required to determine the impact of the categorization on hospitals' utilization patterns, care-mix, and finances. The proposed project will consist of 4 basic tasks; (1) Develop a set of criteria that could be used to measure the extent to which categorization has been implemented in a region; (2) Review at least 20 areas of the county where categorization is claimed to have taken place, and using the criteria developed above, assess the extent of implementation. Accurately define measures which are appropriate to address the questions of: (a) how categorization of hospitals' emergency departments affects case-mix; (b) what effect does categorization have on both inpatient and outpatient utilization patterns; (c) how does categorization affect hospital finances.

****Drug Utilization Review and Drug Usage as a Determinant of the Quality of Health Care (HRA 106-74-137)**

Donald C. Brodie, Ph.D.
Los Angeles County - USC Medical Center
Los Angeles, California

6/29/74 - 12/28/75

(No Funding FY 75)

The purpose of this project is to generate a monograph that provides a summary of all currently available information on "Drug Utilization Review and Drug Usage as a Determinant of the Quality of Health Care." The contractor will update and interpret the current literature as it relates to patterns of drug use and costs, with particular reference to the impact of drug induced disease. Based upon this information and an analysis of drug data at several large volume sources, prospective and retrospective models of drug utilization review will be developed, each of which might function as a determinant of the quality of care. Cost factors will be evaluated and will include such items as computer expenditures, manhour cost of review, savings in terms of prevention of errors, and cost-benefit analysis. A performance evaluation will also be conducted to include such factors as drug-drug interactions, inappropriate prescribing, adverse drug reactions, validity and reliability of data among others. Both inpatient and outpatient care settings will be considered.

****Indices of Adequacy of the Emergency Medical Care Process (HRA 106-74-138)**

David Boone
Boone, Young & Associates, Inc.
551 Fifth Avenue, Suite 1523
New York, New York 10017

6/26/74 - 12/15/74

(\$45,626)

The purpose of this competitive contract is to develop a series of 10 process measures through the consensus judgement of experts in emergency medical care. These measures will be used to create an index of the adequacy of care given in "true" emergency situations, and will be designed to identify the major elements of the care process that can be expected to have an effect on the outcome of a medical emergency. The project is also designed to examine various kinds of small group decision-making processes, to establish the value of such procedures in obtaining consensual judgements.

****The Use of Input/Output Descriptions for High Cost Health Components:
Kidney Related Health Services (HSA 106-74-139)**

Alice E. Kidder, Ph.D.
Roy Littlejohn Associates
1335 Green Court, N.W.
Washington, D.C. 20005

6/29/74 - 6/28/75

(\$123,000)

The delivery of health services requires a planning process to assess in economic terms the trade offs between the various modes of care. This need is particularly great in the high cost health activities, where technological breakthroughs permit the saving of human lives, but where facilities are currently of limited availability and uneven distribution.

The objective of this project, therefore, is to develop a planning methodology for the allocation and location of high cost health services specifically kidney related services. The methodology is based on Input/Output or Markov Chain descriptions of three different geographic areas: (1) urban metropolis; (2) large state; and (3) group of rural states.

The research activity will produce: a comparative analysis of the three areas in terms of structure and costs; a forecast of utilization for each area; and an assessment of the impact of any planned changes in the service for each area.

****Validity and Reliability Studies on the Techniques for
Identifying Scarcity Areas (HSA 106-74-141)**

David H. Gustafson, Ph.D.
Wisconsin University
Madison, Wisconsin 53706

6/28/74 - 6/27/76

(\$136,865)

This contract is designed to test the assumptions, and the feasibility of a health scarcity index developed by the University of Wisconsin group for the Community Health Service. Questions of index validity and reliability will also be addressed. This research will refine the methodology associated with the index, determine criteria for panel selection and operation, improve understanding of variable selection and data requirements, and consider alternate analytic procedures such as the regression and multi attribute utility models. Cross validation of the scarcity index with one or more health status index will also be considered.

****Program Analysis of Algorithm Projects and Design of a Study
to Evaluate the Impact of Physician Extender Algorithms on
Productivity** (HSA 106-74-144)

J. Bone
Systems Sciences, Inc.
4720 Montgomery Lane
Bethesda, Maryland 20014

6/30/74 - 3/31/75

(\$121,090)

During the last three years the Federal Government has invested nearly one million dollars to support the development of algorithms/protocols. The algorithms assist the physician extender in collecting clinical data and in the clinical decision making process while providing a mechanism for audit. The problem now is to define and demonstrate the value of these tools in increasing productivity and quality. This project is to assess the value of the use of algorithms by (1) comparing and analyzing the algorithms developed by four major sites; (2) describing the training received by physician extender; (3) characterizing the training sites; (4) describing the characteristics of patients treated by physician extenders with an algorithm, including the reason for the visit, the source of payment and the disposition; and (5) developing a proposed experimental study to handle the issues of productivity and cost.

****Medicaid Analysis of Utilization, Cost, and Quality** (HSA 106-74-145)

Douglas Skinner
Applied Management Sciences
962 Wayne Avenue, Suite 701
Silver Spring, Maryland 20910

6/30/74 - 4/1/75

(\$259,955)

The study is to measure, assess, and evaluate the utilization patterns, costs, and quality across various State Medicaid plans. The study design involves a pilot test to obtain data from three selected states that will address a number of key issues: (1) What are the population characteristics of those covered by the Medicaid program and how do they vary by state? (2) What are the service utilization experiences of the covered population by type of eligibility? (3) What are the costs associated with the observed utilization by type of service on a unit, per capita and family basis? (4) What are the characteristics of Medicaid providers? (5) Has the Medicaid program affected the availability and accessibility of health services to the indigent? (6) How does the quality of health services delivered under Medicaid compare to that received by the rest of the population.

****Program Evaluation Alternatives in Long Term Care --
Alternative Modes of Adult Day Care (HRA 106-74-148)**

William G. Weissert, Ph.D.
TransCentury Corporation
1789 Columbia Road, N.W.
Washington, D. C. 20009

6/27/74 - 5/1/75

(\$127,950)

Day Care for the elderly has been interpreted in many ways, ranging from a level of care provided in centers offering only a pleasant supervised comfortable environment, with some diversion, to provision of rehabilitation and restorative services aimed at enabling the individual to return to independent living in the community. Many programs that should properly be classified as Senior Centers call their programs "Day Care". The study is to develop narrative and quantitative comparisons among 15 centers (4 Federally funded time-limited research demonstrations and 11 on-going operational centers) to determine what needs to be known in quantitative terms, and how it can be uniformly and consistently obtained, in order to enable resource allocators to compare alternative configurations of day care services.

****Short-Term Training of Physicians Serving as Medical Directors of
Long-Term Care Facilities (HRA 106-74-156)**

Herman W. Gruber
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

6/29/74 - 12/28/75

(\$135,000)

To provide, under state medical societies' auspices, a joint training experience for physicians, administrators and nurses providing care in SNFs to enhance the ability of the physician to serve as a medical director (and of the administrator and nurse to support the physician in that role), to understand the functions and organizational alternatives involved in the medical direction, and to prepare physicians for the task of organizing permanent state and local work groups that have the continuing responsibility for upgrading medical services in nursing homes.

****Study of Nature and Effects of Messages Received at an EMS Dispatching Center**
(HRA 106-74-157)

Geraldine Keller, Ph.D.
Ohio State University Research Foundation
1314 Kinnear Road
Columbus, Ohio 43212

6/28/74 - 6/29/75

(\$84,850)

The project will study relationships between the content of messages received by the Emergency Dispatch Center and the decisions, actions and outcomes that follow. The contractor will identify characteristics of the communications received at an emergency transport dispatch telephone number which are related to EMS System responses, and judge the appropriateness of those responses according to the later condition of the patients, including those who were "screened out" or otherwise did not enter the System. Through analysis of the taped records of telephone communications, the project will identify significant elements associated with a given system response, such as the degree of effect, semantic characteristics, "key words," length of message, amount of probing by dispatcher, apparent characteristics of the caller such as age, race, sex, location of call, etc. Follow-up observations will identify the course of the applicant, and determine the effectiveness of communications and decision-making, and suggest possible methods for improving the responses.

****Long Term Care Reimbursement Experiments--Evaluation of Experiments in Intermediate Care Facility, Homemaker, and Day Care Services**
(HRA 106-74-159)

William Walton, Ph.D.
Medicus Corporation
Regional Office
7315 Wisconsin Avenue
Washington, D. C. 20014

6/30/74 - 6/30/76

(\$479,000)

Public Law 92-603 Section 222 (b) authorizes experiments and demonstrations "to determine whether coverage of intermediate care facility services and homemaker services would provide suitable alternatives to post-hospital benefits presently provided under Title XVIII of the Social Security Act"; and, further, authorizes the establishment of "an experimental program to provide day-care services, which consist of such personal care, supervision, and services as the Secretary shall by regulation prescribe for individuals eligible to enroll in the supplemental medical insurance program established under Part B of Title XVIII and Title XIX of the Social Security Act, in day-care centers which meet such standards as the Secretary shall by regulation establish." This contract evaluates a number of experimental demonstrations at geographically dispersed sites.

****A Study of the Effects of copayment Levels on the Quantities of Prescription Drugs Purchased (HRA 106-74-163)**

Lon H. Kennard, Ph.D.
Paid Prescriptions
1633 Bayshore Highway
Burlingame, California 94010

6/28/74 - 3/28/75

(\$60,500)

The contractor will provide data from their paid claims and enrollment files and cultivate analysis to determine the elasticity of demand for several categories of drugs at approximately six different copayment levels. The demand elasticity will be specific as to age, sex, income class and size of prescription.

****Nationwide Long-Term Care Education System (HRA 106-74-167)**

Norman Silberberg
Sister Kenny Institute
1800 Chicago Avenue
Minneapolis, Minnesota 55404

6/28/74 - 12/27/75

(\$93,900)

To provide the same service and focus as the six training centers established earlier, i.e., 3-week apprentice program, a career development plan for participants, a training program for state long-term care allied health teams, and categorical training programs. In addition, a program for training inservice education designees will be carried out.

****Nationwide Long-Term Care Education System (HRA 106-74-171)**

Barry Seward
Swope Ridge Health Care Center
59th and Swope Parkway
Kansas City, Missouri 64130

6/30/74 - 12/29/75

(\$106,200)

To provide the same service and focus as the six training centers established earlier, i.e., a 3-week apprentice program, a career development plan for participants, a training program for state long-term care allied health teams, and categorical training programs. In addition, a program for training inservice education designees will be carried out.

****Experiments and Demonstrations Authorized under P.L. 92-603,
Section 222(b)--Homemaker and Day Care (HRA 106-74-172)**

Larry S. Pickard
Lexington-Fayette County Health Department
330 Waller Avenue
Lexington, Kentucky 40504

6/28/74 - 1/27/76

(\$159,885)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care service, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Titles XVIII and XIX). The specific objectives of this contract are to demonstrate provision of two services (Homemaker Services and Day Care Services) to: (1) determine cost of providing these services; (2) compare cost of providing the two new services and currently covered services; and (3) determine and compare extent to which the new services will enable an eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****Experiments and Demonstrations authorized under P.L. 92-603,
Section 222(b)--Homemaker and Day Care (HRA 106-74-173)**

Madley Dale Hall
San Francisco Home Health Service
2940 16th Street, Suite 301
San Francisco, California 94103

6/28/74 - 1/27/76

(\$498,384)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care service, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Titles IVIII and IIX). The specific objectives of this contract are to demonstrate provision of two services (Homemaker Services and Day care Services) to:

- (1) determine cost of providing these services; (2) compare cost of providing the two new services and currently covered services; and
- (3) determine and compare extent to which the new services will enable an eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****Experiments and Demonstrations authorized under P.L. 92-603,
Section 222(b)--Day Care (HRA 106-74-174)**

Robert W. Hack
St. Camillus Skilled Nursing Facility
813 Fay Road
Syracuse, New York 13219

6/28/74 - 1/27/76

(\$179,000)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care services, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Title IVIII and IIX). The specific objective of this contract is demonstrate provision of Day Care Service to: (1) determine the cost of providing such service; (2) compare the cost of providing the Day Care Service and currently covered services; and (3) determine and compare the extent to which the Day Care Service will enable an eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****Experiments and Demonstrations authorized under P.L. 92-603,
Section 222(b) --Day Care (HRA 106-74-175)**

Charlotte M. Hamill
Burke Rehabilitation Center
785 Massaroneck Avenue
White Plains, New York 10605

6/28/74 - 1/27/76 (\$296,213)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care services, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Title XVIII and XIX). The specific objective of this contract is to demonstrate provision of Day Care Service to: (1) determine the cost of providing such service; (2) compare the cost of providing the Day Care Service and currently covered services; and (3) determine and compare the extent to which Day Care Service will enable an eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****Experiments and Demonstrations authorized under P.L. 92-603,
Section 222(b) --Homemaker Services (HRA 106-74-176)**

Edmond Perregaux, Jr.
Homemaker-Home Health Aide Services
of Rhode Island
265 Melrose Street
Providence, Rhode Island 02907

6/28/74 - 1/27/76 (\$135,969)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care services, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Titles XVIII and XIX). The specific objective of this contract is to demonstrate provision of Homemaker Services to: (1) determine the cost of providing such service; (2) compare the cost of providing the Homemaker Services and currently covered services; and (3) determine and compare the extent to which the Homemaker Services will enable and eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****Experiments and Demonstrations authorized under P.L. 92-603,
Section 222(b)--Homemaker Services (HRA 106-74-177)**

Eugene Seymour, M.D.
Inter-City Home Health Association
601 North Vermont Avenue
Los Angeles, California 90004

6/28/74 - 1/27/76

(\$113,852)

The primary purpose of P.L. 92-603, Section 222(b), is to evaluate the cost and impact of three services, namely, the intermediate care facility, homemaker services, and day care services, for persons now in need of such services, drawing on the same source of funds as are now being used to pay for institutionalization and home health services (Title XVIII and XIX). The specific objective of this contract is to demonstrate provision of Homemaker Services to: (1) determine the cost of providing such service; (2) compare the cost of providing the Homemaker Services and currently covered services; and (3) determine and compare the extent to which the Homemaker Services will enable an eligible individual to reach and maintain his highest level of performance or will prevent or retard institutionalization as compared to the effectiveness of benefits currently provided.

****A Systems Approach to Identification of Problems and Analysis of
Potential Solutions in the Ambulatory Clinic Facility of a Group
Practice (HRA 106-74-180)**

Ronald M. Pickett, Ph.D.
Bolt Beranek and Newman, Inc.
Cambridge, Massachusetts

6/28/74 - 6/27/75

(\$185,024)

This program is concerned with the improvement of ambulatory health care through systems analysis and modeling of a group practice. One goal is to identify significant and potentially generalizable problems which can be remedied by off-the-shelf technologies. The work will proceed in parallel along four major themes: (1) survey and selection of clinic evaluation methodologies; (2) identification and verification of clinic problems; (3) modeling of the clinic and rating of problems; and (4) survey and selection of off-the-shelf technologies. Each theme starts with a comprehensive overview and proceeds to focus the effort on a manageable set of clinic problems and solutions. The end product will be a set of plans for implementing the proposed solutions in the clinic under study. A second goal, for benefit in future studies, is to evaluate and critique the techniques employed to structure and administer this program, including the clinic evaluation methodology employed.

****Improving the Performance of Hospital Outpatient Clinics Through
Planned Applications of Management Science (HRA 106-74-181)**

Stephen D. Roberts, Ph.D.
Regenstrief Institute
Indianapolis, Indiana

6/28/74 - 6/27/75

(\$177,214)

This project will demonstrate methods to improve the performance of a set of ambulatory clinics in a large metropolitan hospital outpatient facility. After a survey of methodologies and off-the-shelf technologies, the project will adopt a four step problem-oriented approach: subjective analysis, objective data collection, problem assessment, and planning for solutions. The subjective analysis includes questionnaires to patients, physicians, and staff with follow-up discussions being directed towards goal setting and perceived impediments to improved performance. The objective data collection includes documentation of operational information, cost analysis, accessibility, and quality of care from medical and social perspectives using previously designed instruments as much as possible. Problem assessment will involve precise problem definition in qualitative and quantitative terms. Problems etiologies will be hypothesized and explored with special emphasis on alternatives and their impacts on goals, operations, costs, and quality. Plans for solutions will involve a selection and recommendation among alternatives in light of objectives stated. The plan will also include implementation strategies to insure the acceptance, implementation, and maintenance of effectiveness of recommendations.

****A Study of the Technology Required to Support Non-Physician Providing
(HRA 106-74-182)**

John J. O'Neill
Mitre Corporation
McLean, Virginia

6/30/74 - 6/28/77

(\$199,784)

The purposes of this contract are (1) to study the communications and information flows associated with the delivery of health care, with particular attention to health care provided by non-physicians in rural, isolated areas, (2) to study the effectiveness of various communication modalities for achieving the required information flows, and (3) to provide systems engineering and program integration support to the National Center for Health Services Research, Division of Health Care Information Systems and Technology. The basic premise to be addressed is that a lesser-trained person provided with sophisticated technological support (such as two-way interactive television) is "equivalent" to a person with more training and less technological support. First, a methodology will be developed for assessing the performance of a particular "manpower/technology combination," to include a computer model of a "patient trajectory". Second, specific experimental hypotheses will be developed from the basic premise, and to test these a number of real health care delivery sites will be selected and each provided with a particular manpower/technology combination. Third, these field trials sites will be monitored over a two-year period using the assessment methodology previously developed.

****Systems of Reimbursement for LTC Services (HRA 106-74-186)**

Douglas Skinner
Applied Management Sciences, Inc.
942 Wayne Avenue, Suite 701
Silver Spring, Maryland 20910

6/30/74 - 8/29/75

(\$99,600)

The purpose of this procurement is to obtain a report on the regulatory aspects of reimbursement systems as they affect cost and quality in the delivery of long-term care services. Present systems will be considered as well as recommendations for improved systems of reimbursement.

The procedure involves a survey to collect information, in the form of data, reports, and other documents, which will then be provided in meaningful and readily usable form, as resource materials to those who will be producing the potential solution papers which are the subject of this contract. People most knowledgeable as to the problems involved will prepare these papers, and deliver them at four state and two national meetings. These papers along with the data and analyses, and the Final Report for the project, will be of importance to the policy makers and program managers involved in this area, and will assist them in bringing about some better system(s) of reimbursement for long-term care services.

****Evaluation of Emergency Medical Devices and Systems (HRA 106-74-188)**

Joel Nobel, M.D.
Emergency Care Research Institute,
Philadelphia, Pennsylvania

6/30/74 - 6/29/76

(No Funding FY 75)

This project is intended to provide a technical assessment of the quality, safety, and efficacy of devices used in the delivery of emergency medical services. The program includes a detailed comparative evaluation of competing devices using systematic testing methodologies to reflect actual user conditions, including environmental stability, safety, efficacy for the assigned function, and appropriateness of the function to the physiologic problem at hand. The contract is also aimed at development and testing of practical inspection and preventive maintenance procedures and at widespread dissemination of findings and appropriate standards. These standards are intended to provide a better basis for the selection, inspection, maintenance, and clinical use of emergency medical devices, particularly those on the "approved lists" sanctioned by several federal agencies and accepted in the EMS Systems Act and highway safety legislation.

****Nationwide Long-Term Care Education System (HRA 106-74-189)**

I. D. Greenstreet
L. C. Foas Sunset Home
13023 Greenwood Avenue, North
Seattle, Washington 98133

6/29/74 - 12/28/75

(\$119,045)

To provide the same service and focus as the six training centers established earlier, i.e., a 3-week apprentice program, a career development plan for participants, a training program for state long-term care allied health teams, and categorical training programs. In addition, a program for training inservice education designees will be carried out.

****Econometric Analysis of the Effects of Health Insurance and Supply Factors on the Provision of Hospital Service (HRA 106-74-190)**

Edward S. Hollander
Robert S. Nathan Associates, Inc.
1200 16th Street, N.W.
Washington, D. C. 20036

6/30/74 - 4/29/75

(\$118,134)

This project will analyze a large volume of data in computer-usable form relating the socio-economic, financial, medical, and insurance coverage characteristics of 23,000 persons who were patients at one of several hospitals in 1972. Econometric techniques will be employed to examine relations among utilization, diagnostic, insurance, socio-demographic, and other variables. Analysis will be made of the impact of different insurance schemes on hospital length of stay and service utilization, the effect of third-party discount rates on the mixture of services provided, and the effect of the physician/hospital relationship, and different hospital characteristics on the various services offered.

**Emergency Medical Services in HMO's

(HFA 106-74-193)

Elliott Stern
Group Health Association of America, Inc.
1717 Massachusetts Avenue, N.W.
Washington, D.C. 20036

6/30/74 - 6/27/75

(\$136,660)

This is a one year study designed to describe, analyze and evaluate the relationships between the structural parameters of emergency medical services costs and their effect on premium rate structure in six prepaid group practice health maintenance organizations. The study will examine different EMS patterns, compare special EMS provisions and policies, assess cost/effectiveness of setting up and operating alternatives and determining existing and optimum relationships between HMO's and EMS Councils.